

Special Project Abstracts

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Special Project Abstracts

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The EMS Authority's Special Grant Program

The Health and Safety Code (Sec. 1797.200) permits a county to develop an EMS program. Each county developing an EMS program must designate a local EMS agency, which may be the county health department, an agency established and operated by the county, an entity with which the county contracts for the purposes of EMS administration, or a joint powers agency. Funding of local EMS agencies is generally the responsibility of the county establishing the EMS program. In California, the development of EMS systems has been varied as a result of the state's large size, geographical features, diverse population distribution, and differing availability at the local level of adequate finances and other resources. In an effort to promote the development and maintenance of EMS systems, some state and federal funding is available to assist local EMS agencies in maintaining, developing, improving, and evaluating local services.

The EMS Authority administers two local assistance funding programs. They are (1) the State General Fund and, (2) the Federal Preventive Health and Health Services (in California called Prevention 2000) Block Grant.

Prevention 2000 Block Grant funds (approximately \$1.6 million) are allocated to local EMS agencies annually for special projects to develop, implement, and improve local and state EMS capabilities.

Special Project Grant Selection Process

The EMS Authority utilizes a competitive grant selection process. Proposals are sorted and reviewed by target areas to allow an organized and equitable review process.

A review committee consisting of 5-8 reviewers drawn from the EMS community convenes in Sacramento. The committee consists of EMS administrators, medical directors, and subject experts as determined by the EMS Authority. Individuals do not serve on a target area committee for which their local EMS agency has submitted an application. There is one primary and one secondary reviewer for each grant application. They review in depth and present the project to the whole committee. All reviewers receive copies of all of the proposals being reviewed by the committee.

The reviewers make ranked recommendations for funding of projects and provide written comments on each proposal to the EMS Authority.

The EMS Authority makes the final selection of projects to be funded. Funds are allocated according to the ranking of the proposals. Amounts allocated are related to the appropriateness of the budget, the potential benefit, and the availability of funds.

The EMS Authority provides a summary of the review committee's comments (positive and negative) for each proposal to help applicants improve future proposals for funding.

With respect to Special Project Grants, it is EMSA's goal to continue the funding stream to local EMS agencies. The specific use of these funds are to assist local EMS agencies to improve underdeveloped EMS system components.

It is also our goal to improve the transferability of projects, by examining the statewide application of proposed projects. We wish to reduce the reliance upon special projects to augment local EMS agency budgets.

The EMS Authority distributes the abstracts of projects annually and will continue a participatory review of grant submissions to meet these goals.

Section I contains the Abstract Reports from FY 97/98.

Section II contains the Abstract Reports from FY 98/99.

SECTION I

SPECIAL PROJECT ABSTRACTS

1997/98 SFY GRANTS

Disaster Medical Assistance Team (DMAT)

Grantee:

Inland Counties EMS Agency

Project Number: EMS-7032

Project Period: 07/01/97-06/30/99

Project Amount: \$30,000.00

EMS Administrator:

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Introduction

California has taken various steps to mitigate the medical effects caused by its numerous disasters. The formation of seven Disaster Medical Assistance Teams (DMAT) is an example of this effort. These DMATs are comprised of medical and health professional volunteers who are organized to maintain 12 hour team activation. In order to provide organized medical services in the disaster setting the team members and the teams practice their skills throughout the year. This project assists the DMATs by providing organizational support and funding for larger multi-organizational exercising.

DMATs are located in San Diego, Orange County, San Bernardino, Los Angeles and the San Francisco Bay area. California also hosts a Psychological Services specialty teams.

Project Description

In the Fiscal Years 1997-99, this project set out to manage \$30,000 provided through the California Emergency Medical Services Authority so that particular objectives leading to a statewide exercise would be accomplished. Various tasks were organized to facilitate the exercise completion. They ranged from providing assistance to the team commanders and planning officers so that they could meet as needed to plan the exercise, to developing a video presentation

which will explain the DMAT concept and operations to those unfamiliar with the practice of emergency medicine under austere conditions.

Tasks/Methodology

Under this grant, the anticipated work was to:

- Host a 2-day seminar or workshop for the teams CA-1 through CA-10.
- Coordinate and facilitate attendance and obtain facilities necessary for a series of 2 full day southern California workshops.
- Participate with the team Commanders, EMS Authority and the California National Guard as they develop Rough and Ready '98.
- Coordinate on the production of a training and recruitment video.
- Coordinate with the EMS Authority on the development of a statewide disaster conference and subsidize travel for attendance by representatives from each county (Operational Area).

Outcomes

Accomplishments include the following:

The exercise Rough 'n Ready 99 was held April 23-25 at El Toro Marine Base, Orange County, California. Teams provided medical services to persons recently exposed to and affected by terrorist released hazardous

materials. DMATs operated from their emergency materials cache.

Facilities, speakers and locations were afforded for the 2 day southern California DMAT conferences.

Attendance at the Rough 'n Ready planning meetings was afforded through air fare purchases.

A twenty-seven (27) minute DMAT operational activities and recruitment video was completed by the Los Angeles County Medical Center Audio Visual Department.

Disaster conferences were held in northern and southern California on October 21-22 and October 7-8, 1998 respectfully.

Conclusion

Generally, this project allowed a set of widely dispersed volunteer disaster medical professionals to plan for several events which helped them standardize, promote and sharpen their disaster response skills. Preplanning is a tool which can expand the efficient delivery and use of necessary medical and health supplies. Support from Federal funds and personnel, the California EMS Authority, the National Guard, the California Department of Health Services and the DMAT sponsoring agencies is necessary to make these exercises a reality. Each of the preceding agencies benefits from and therefore should participate in DMAT activation planning processes.

Enhanced Paramedic Training

Grantee:

Merced County EMS Agency

Project Number: EMS-7018

Project Period: 07/01/97-03/30/99

Project Amount: \$33,000.00

EMS Administrator:

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Introduction

One of the current areas of focus for prehospital emergency medical services is research into the appropriateness of the interventions utilized in the field. One could argue that the medical protocols used by paramedics are simply an extension of the medical care provided at the emergency department (ED), which has had extensive research conducted to evaluate their efficacy. The real question is relative to the use of these advanced life support protocols in the field rather than providing them in the ED, and whether their use (and substantial cost) can be justified from the perspective of improved patient outcomes. Additionally, in an environment of health care cost-reduction, there is pressure on the EMS system to allow paramedics to evaluate patients for dispositions other than transport to an ED, which is viewed as a cost center to managed care.

To that end, the State of California Emergency Medical Services Authority approved the grant application of Merced County for a research project aimed at evaluating the effectiveness and safety of paramedics determining alternate field dispositions for patients accessing the 911 system.

Project Description

The project required all paramedics to perform their normal assessment of patients and, prior to contacting the Base Hospital, call in their assessment and study disposition to the medical dispatch center. Their assessment was chosen from a list of the 300 most commonly used ICD-9-CM codes, to allow for comparison with the ED physician. Their study disposition refers to one of four choices that the paramedic would have selected for the patient if they worked in a system that allowed alternatives to ED transport, and include; 1) This patient could have been safely treated & released in the field, 2) This patient could have been safely treated & referred for PCP follow-up or nurse advice line, 3) This patient could have been transported to an urgent care center or Physician's office, and, 4) This patient required ambulance transport to an emergency department. When the patient was delivered to the emergency department, a study form was left for the ED physician to complete - which asked the physician the same study disposition questions, based on their diagnosis. The ED physician was blinded to the paramedic's study disposition. Phase two should have included both didactic and clinical training in physical exam and history-taking skills. Phase three would have been a repeat of phase one, using only the paramedics that attended the enhanced training.

The ultimate objective of comparing the effectiveness and safety of paramedic disposition decisions with their current training, contrasted against the results following enhanced physical exam and history-taking training was not realized. Multiple problems with obtaining adequate data as well as clinical time for the paramedics made it impossible to complete phase two and three. Nonetheless, we feel that the phase one data collection process yielded interesting results; testing their ability to provide for alternate patient dispositions with their current level of training.

Tasks/Methodology

See Project Description above.

Outcomes

The only information available for analysis for this project is the phase one data. The total records enrolled in this study is 95 (n=95).

Disposition Evaluation			Confidence Interval	Overall Confidence Interval
Dispo Match	70	73.68%	0.64-0.82	0.7-0.87
Dispo Under Triage	20	21.05%	0.13-0.31	
Dispo Over Triage	5	5.26%	.02-0.12	
Total Enrolled in Study	95	100.00%		

Table 1

In table 1, for the disposition evaluation, “Dispo Match” refers to an exact match; “Undertriage” to a paramedic study disposition that is less restrictive than the ED physician; “Overtriage” as a paramedic study disposition that is more restrictive than the ED physician. Potentially, undertriage places a patient at risk, while overtriage indicates no relative value to the system. Confidence intervals express the degree to which one can expect similar results given any other sampling of paramedic assessments, given their current level of training and or experience.

Match (M)	40	42.11%
Relative Match (RM)	34	35.79%
No Match (NM)	21	22.11%
Total	95	100.00%

Table 2

Diagnosis Evaluation						
	Match	%	Relative Match	%	No Match	%
Dispo Match	30	75.00%	25	73.53%	14	66.67%
Overtriage	1	2.50%	2	5.88%	2	9.52%
Undertriage	9	22.50%	7	20.59%	5	23.81%
Total	40	100.00%	34	100.00%	21	100.00%
Confidence Interval	0.32-0.53		0.26-0.46		0.14-0.32	

Table 3

For the diagnosis evaluation (table 2 & 3), the ICD-9-CM standard was used, both by the paramedics and ED physicians. Three parameters were used to describe the degree of accuracy of the paramedic assessment¹; exact match, relative match and no match. Exact match and no match are self-explanatory. Relative match is an admittedly subjective judgment regarding the “degree” of accuracy of the paramedic assessment. Relative match was used when the paramedic’s less specific finding (e.g. acute abdomen) was consistent with the ED physician diagnosis (e.g. appendicitis). Relative match was considered a positive outcome if the patient’s study disposition took them to a physician for evaluation. Both relative match and no match were a particular concern if the patient’s study disposition did not result in an immediate physician follow-up (undertriage).

Conclusion

The results of this study show that paramedics and physicians from this rural EMS system agree on patient disposition about 79% of the time. It should be noted that we did not test

¹For the purpose of the study, the ED physician diagnosis is assumed to be the correct one.

physician inter-rater reliability. The physicians may have disagreed with each other as frequently as did the paramedics. In planning EMS systems of the future, this data does not support paramedics making transportation decisions without either additional training or physician involvement. It must be made clear that the paramedics did not have the same data that the physicians had to make an accurate disposition. Although this appears to put the paramedics in an unfair position, the medics have to make decisions based on incomplete information when evaluating patients outside medical facilities.

We also examined the ability of the paramedic to make a field diagnosis and compared that diagnosis to the discharge diagnosis from the emergency department. The medics made the correct diagnosis 79% of the time; quite high for such complex decision making based on incomplete information and limited training compared to other health professionals. Although we were more interested in determining whether medics could make disposition decisions, it is interesting to note that whether the medic made the correct diagnosis or not, it had no effect in helping them make the correct disposition decision.

We feel that 79% agreement is not sufficient to allow paramedics to make field disposition decisions without further training or the involvement of other health professionals.

Grief Support Services

Grantee:

San Francisco County EMS Agency

Project Number: EMS-7034

Project Period: 07/01/97-09/30/99

Project Amount: \$44,000.00

EMS Administrator:

Abbie Yant

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(415) 554-9963

Introduction

The purpose of this project was to use the curriculum and grief support materials developed in the first grief support grant and use them to train first responders. Evaluation by first responders are being done both before and after training to measure their perspectives on grief support. Survivors of victims who are pronounced on scene were also interviewed to incorporate their experiences with grief support into the evaluation of the program.

Project Description

This project's main objective was to show that the training and use of a grief support program for first responders would positively influence how care providers were able to support survivors of field pronouncements.

The major objectives of the project were:

- ? Pilot the grief support training curriculum developed in a prior grant cycle in an EMT training program prior to dissemination of the model throughout the state.
- ? Adapt and implement grief support instruction as a mandatory component of Fire/EMT-P training in a large metropolitan fire department.

- ? Evaluate all resource materials (survivor brochures, pocket cards, resource manuals) after six months of field use and make changes as necessary.
- ? Evaluate the impact of grief support training on survivors and EMS providers through follow-up contact, written evaluations and review of documentation.
- ? Develop a mechanism for follow-up support to the EMS providers following field pronouncements through referrals made to departmental Critical Incident Stress Debriefing (CISD) teams and/or the Grief STEP™ Program telephone consultation service.
- ? Develop an Interdisciplinary Grief Support Ethics Committee to review, discuss and provide direction for issues identified during project activities, or from survivor and provider follow-up and/or written evaluations/questionnaires.
- ? To educate the community about the intention and benefits of the SF EMS Section's grief support project.

Tasks/Methodology

The San Francisco EMS Section contracted with The Access Group, Ltd., the contractors for the initial grant, to provide training and assistance in the evaluation of the program. Classes were taught to first responders from different levels. Pre and post test evaluations were sent to all first responders who participated in training and post tests were sent to all EMT-P providers employed by the San Francisco Fire Department. Survivors were identified from review of pre-hospital care records for two random months.

Outcomes/Conclusion

Evaluations of the training by all levels of providers were very positive. Pre and Post testing of providers showed a positive change in their attitudes about providing grief support. Survivors that were interviewed were supportive of grief support and thought that EMS performed their jobs very sensitively and with compassion. Grief support materials were not used widely for grief support with the survivors who were interviewed.

Education Designed to Utilize Fast Access to Stroke Treatment

Grantee:

San Francisco County EMS Agency

Project Number: EMS-7035

Project Period: 07/01/97-09/30/99

Project Amount: \$54,000.00

EMS Administrator:

Abbie Yant

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Introduction

The San Francisco EMS Section undertook a project to educate the public on symptoms of stroke and the urgency for rapid access to medical care. When this project began in 1998, we anticipated that we would need to develop an array of educational materials. Instead we formed a work group with participants from an active Stroke Education Committee of the San Francisco Chapter of the American Heart Association. We conducted surveys of our local hospitals to determine their capabilities for caring for persons presenting in their emergency departments with symptoms of stroke. We analyzed local data that showed the demographics of stroke in our community. We then conducted a comprehensive needs assessment to learn the communities understanding of stroke symptoms and need for accessing emergency care. Based on the findings of data and needs assessment, and input from our stroke committee, we developed and implemented a media campaign for promoting early access to care for stroke.

Project Description

The San Francisco EMS Section reviewed literature, conducted local needs assessment and focus groups to select target population and stroke education messages. We then worked with our public relations consultant

to develop an educational campaign using video commercial aired on local cable television to reach our target audience. We also released the findings of our stroke study to the media and continued to do media outreach.

Tasks/Methodology

The project staff conducted a comprehensive community needs assessment to learn the general populations understanding of the symptoms of stroke and the need to call 911 for emergency medical care. We conducted focus groups with actual stroke victims who related in their own words their stories about their stroke experience.

Project staff reviewed existing stroke education materials. Many excellent materials are available from the American Heart Association.

We determined the best method to reach the most persons in our target populations was through the production and airing of television commercials. We produced these commercials and aired them on local cable television.

Findings of the stroke studies were released to the media along with various articles for inclusion in ethnic media.

Results of the hospital surveys are

distributed to the individual hospitals, the Hospital Council, the Emergency Physician Association. Project staff, Dr. Wade Smith, continues to work with the medical and hospital community to develop and implement standards for improved emergency medical care to persons with stroke.

Outcomes

- “Edu-Fast Stroke Project Needs Assessment Report”
- 3 video commercials
- Stroke Fast Action to Treatment Campaign Kit
- ED Stroke Care Survey Report

Conclusion

This project was the result of a collaborative effort of health education professionals, emergency medical systems clinicians, neurologists, public relations experts and community members. The products produced under this grant will continue to serve our community and through the distribution of said materials, we anticipate that its usefulness will be felt throughout California. Stroke continues to be a major threat to the health of Californians. Through collaborative efforts such as this, we can make a positive impact on the lives of persons who experience stroke and their families.

SECTION II

SPECIAL PROJECT ABSTRACTS

1998/99 SFY GRANTS

Regional Disaster Medical Health Coordinator (RDMHC)

Grantee:

Contra Costa County EMS Agency

Project Number: EMS-8027

Project Period: 07/01/98-06/30/99

Project Amount: \$80,000.00

EMS Administrator:

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Introduction

Region II, comprised of the 16 northern California coastal counties, is one of six (6) regions established by the State Office of Emergency Services for the coordination of disaster mutual aid. The Contra Costa County Health Officer has served as the Region II Regional Disaster Medical/Health Coordinator (RDMHC) since 1990. The RDMHC is responsible for coordinating the acquisition of medical/health mutual aid within Region II, both in support of events *not* affecting the region and those occurring within the region.

Project Description

The focus of the ninth year RDMHC Project was development of the Response Information Management System (RIMS) in the Operational Area Disaster Medical/Health Coordinators (OADMHC) Medical & Health Branch or Departmental Operations Center (DOC) locations. Training was conducted for the OADMHC group at one of the quarterly meetings by State OES Coastal Region staff. By the end of the grant period, five (5) counties have the RIMS capacity; Alameda, Contra Costa, Humboldt, Monterey and Solano. An additional focus of the project was on transitioning the Bay Area Disaster Medical Assistance Team (DMAT), a volunteer team organized under the National Disaster Medical System (NDMS)

through the U.S. Public Health Service. DMATs provide local patient staging/reception services, field level emergency medical treatment, and augment local medical capabilities during disasters, into a self-maintaining group. The DMAT team (CA-6) has progressed rapidly to a Level Two team.

Assisting county OADMHCs with development of their Health Services departmental and operational area plans and annexes was another focus of the project this year.

Tasks/Methodology

Response Information Management System (RIMS): Integrating the State OES RIMS system into the medical and health community became a priority while identifying a regional disaster medical/health communication system. Our purpose was to give the OADMHCs a means of accessing RIMS data directly. How the RIMS Medical/Health forms reached the RDMHC was left to the OADMHC, EMS agency and OES in each of the Operational Area/Counties.

Regional Plan/County Health Services Departmental Plan Development: The Region II RDMHC Interim Emergency Plan was adopted, containing the 16-county and state agency 24-hr. contacts and numbers which are updated

quarterly. With the assistance of State EMSA block grant funding to several counties, departmental Medical and Health Disaster Plans have been completed. Plans are complete or very nearly so in Contra Costa, Marin, Monterey, San Francisco, San Mateo and Santa Clara Counties.

Training and Exercises: Terrorism management planning and training was an emphasis this year: Alameda County sponsored a Terrorism Conference, Oakland hosted Weapons of Mass Destruction Hospital Provider Classes, and San Francisco hosted terrorism and millennium planning meetings.

Outcomes

The products of RIMS implementation, departmental plan development assistance, SEMS training and exercises, quarterly meetings, communications drills, and the strengthening of communication lines and understanding due to the efforts to develop and establish a DMAT team have all contributed to counties' knowledge and understanding of each others' organizations and resources, thus facilitating the implementation of a medical/health mutual aid system.

Conclusion

The relationships established with each of the Operational Areas, the state and federal agencies and other disaster response agencies enhance the Region's ability to provide the State EMSA with closer contacts, and a better trained and better coordinated disaster network of medical and health professionals.

Prehospital Data Linkage and Outcome

Grantee:

Contra Costa County EMS Agency
Project Number: EMS-8028
Project Period: 07/01/98-06/30/99
Project Amount: \$45,500.00

EMS Administrator:

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Introduction

This project was developed to enable the Contra Costa EMS Agency to complete development of an integrated management information system in accordance with the County EMS System Plan by (1) development of a reporting and query system for the paramedic patient care report database, (2) development of a patient outcome data system for patients transported by emergency ambulance to hospital emergency departments, (3) establishment of a system for linking existing EMS data records with each other and with the patient outcome data, and (4) development of a reporting and query system for the linked records. This management information system will be used to support a comprehensive EMS quality improvement system.

Project Description

- The major objectives of the project were:
- To assemble a project management and technical team, and establish a Steering Committee for this project.
 - To review the status of all existing EMS data systems (in Contra Costa County), including record layouts, data dictionaries, reports, and query systems, and review EMS data systems in other areas of the State for applicability to Contra Costa County.

- To complete a minimum set of standard reports for existing data systems including the prehospital patient report (PCR) data, base hospital logs, and Message Transmission Network (CAD dispatch) data.
- To design and implement emergency department data outcome system.
- To design a data linkage system linking ambulance dispatch data, first responder defibrillation data, ambulance patient care report data, emergency department patient outcome data, interfacility transfer data, and trauma registry data.

Tasks/Methodology:

The technical aspects of the project were fulfilled by the data consultant firm we contracted with to perform those tasks. Extensive contribution into project output, including standardized reports, was given by project management staff and the steering committee members.

Outcomes

Sample Standardized Reports:

Patient Care Report (PCR), total and by provider

Provider Unit Counts

Special Scene Conditions

Counts

- Trauma Triage Counts
- Safety Equipment Used Counts
- Vehicle Specifics Counts
- General Assessment Counts
- Nature of Call Counts
- CRAMS Counts
- Assist on Scene Counts
- Anatomic Factor Counts
- Destination Decision Counts
- Mechanism of Injury Counts
- Call Disposition Counts

MTN Dispatch data

- Ambulance Dispatch Report for Code 2 and Code 3 Calls by area and individual provider agency

Base Hospital data

- Base Hospital Counts by Provider Unit

Data inventory list of other local EMS Agencies in California and selected EMS systems in other states.

ED outcome utility developed and installed at several hospitals.

Draft document of suggested database linking fields for year 2 project.

Conclusion

We consider the first year of this project successful. The project has already contributed to an improved EMS system by enhancing the reporting and query capabilities of existing databases, permitting better use of data already collected to augment system evaluation and monitoring. ED outcome data will be linked to PCR data in year two. This will give us the ability to evaluate the care our paramedics are providing and assure appropriate prehospital patient

treatment.

The first year project has also laid the necessary ground work for year two's development of a data record linkage system. This linkage of prehospital patient care report data, first responder defibrillation data, interfacility transfer data, base hospital data, trauma registry data and EMS dispatch records will permit linkage of data elements contained within one record type to the same data elements found in other record types. This linkage will result in further enhancement of system query and reporting capabilities.

EMS Plan

Grantee:

El Dorado County EMS Agency

Project Number: EMS-8029

Project Period: 07/01/98-06/30/99

Project Amount: \$17,184.00

EMS Administrator:

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Placerville, CA 95667

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Introduction

On July 1, 1998, the State Emergency Medical Services Authority awarded a 1998/1999 Block Grant EMS-8029 to the El Dorado County EMS Agency (the Agency). The purpose of the grant was to fund the completion of the El Dorado County EMS Agency's EMS Plan and submit it to the County Board of Supervisors for adoption and to the EMS Authority for approval.

Project Description

El Dorado County lacked an approved EMS Plan as mandated by the Health & Safety Code and other relevant state guidelines. The purpose of the Plan is to provide an organized and logical guide toward assuring the highest quality of emergency care to all residents and visitors to El Dorado County.

Tasks/Methodology

The project was developed by a Core Work Group consisting of EMS Agency staff. The system was developed and implemented in five (5) distinct phases:

Phase 1 - Establish a Core Work Group (CWG) to develop the EMS Plan

A CWG was established consisting of

EMS Agency staff who hold a wide scope of knowledge about emergency medical systems standards, including administrative history and practices, medical protocol, policies, procedures, guidelines, and ambulance billing. Quality Assurance staff members assisted the CWG in the development and research in those sections of the Plan pertaining to QA, dispatch, field activity, training, and system operations. The CWG established weekly meeting times, developed group "norms" to establish requirements and responsibilities for each individual, and interviewed and consulted with field staff, emergency room staff, fire department staff, dispatch staff and others in areas of special expertise and knowledge.

Phase 2 - Assess the viability of the current draft of the EMS Plan.

The CWG reviewed the draft EMS Plan developed in 1995, and determined that the existing draft contained sufficient errors and inaccuracies to render it useless, even as a beginning point. The Work Group was able to use the state-required format of the draft as a template for developing an EMS Plan.

Phase 3 - Develop a work plan to guide the activities and measure the progress of the CWG.

The CWG developed a work plan to

establish timelines, determine when QA staff and experts were needed for consultation, and to provide a tool to monitor Plan progress.

Phase 4 - Revise and re-write the current draft of the EMS Plan.

The CWG used only the format of the 1995 draft Plan to develop a new EMS Plan. The CWG was task-oriented and met weekly. Tasks were assigned and completed. The actual writing of the Plan was done during these meetings on a laptop computer with use of an overhead projector. As the CWG discussed system information, the statements and revisions were typed into the Plan document. This was a highly successful development technique that involved maximum input from all members.

Phase 5 - Submit the plan to the proper authorities.

During April 1999, copies of the draft EMS Plan were distributed to members of the Board of Supervisors, County and Public Health Department staff, base hospitals, ambulance service providers, fire districts, Coroner/Sheriff's Office, OES and EMCC members. A public viewing copy was available with the El Dorado County Board Clerk. A cover letter accompanying the Plan requested that recipients submit questions and comments to the EMS Agency prior to the workshop scheduled for May 3, 1999. The public workshop was held with the El Dorado County Board of Supervisors to provide a public forum for review and comment on the EMS Plan. All questions and comments on the Plan were carefully reviewed by EMS Agency staff, and appropriate changes and/or revisions were made to the draft.

The El Dorado County EMS Plan was submitted to the State EMS Authority for final

review and approval on June 30, 1999. On August 3, 1999, the concept of the El Dorado County EMS Plan was adopted by the County Board of Supervisors.

Outcomes

The choice to utilize a Core Work Group of current EMS Agency staff members rather than a consultant to develop the Plan resulted in the project progressing smoothly and according to schedule. The determination to use only the format of the 1995 draft plan resulted in taking a totally fresh look at all components of the system. The benefits of "in-house" planning versus contracting with a consultant are the shared and communicated knowledge of the El Dorado County EMS system in its entirety. The process has elevated the level of working knowledge of each and every Agency staff member. An additional benefit to the Agency is the significant enhancement of teamwork that developed between staff members. Working so closely on a shared goal provided a deeper level of consensus and understanding of system needs between staff members.

Conclusion

The EMS Plan was submitted to the EMS Authority on June 30, 1999, and the Agency is awaiting comments and recommendations for changes or revisions. The Agency looks forward to the EMS Authority granting approval of the El Dorado County EMS Plan.

1st Responder System Status Analysis

Grantee:

El Dorado County EMS Agency

Project Number: EMS-8065

Project Period: 06/30/99-06/30/00

Project Amount: \$60,000.00

EMS Administrator:

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**Final Report and Abstract Report due
August 31, 2000.**

Regional Disaster Medical Health Coordinator (RDMHC)

Grantee:

Fresno, Kings, Madera EMS Agency

Project Number: EMS-8030

Project Period: 07/01/98-06/30/99

Project Amount: \$40,000.00

EMS Administrator:

Daniel Lynch

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Introduction

OES Region V includes the counties of Kern, Tulare, Kings, Fresno, Madera, Merced, and Mariposa. In addition to these seven counties is Yosemite National Park and the Kings Canyon/Sequoia National Parks. Fresno County is the designated Regional Disaster Medical Health Coordinator for OES Region V. The goal of this program is to bring the individual agencies from within these counties together in order to ensure an organized and effective response. The Fresno/Kings/Madera EMS Agency continues to develop the role of the RDMHC to coordinate the resources and functions within Region V.

Project Description

The purpose of this project was to continue the development of the RDMHC program and complete the plans, procedures, and linkages within OES Region V for an organized and effective response to a disaster incident. The goals and objectives were implemented to organize the infra-structure of the RDMHC program, identify the responsible OADMHC personnel for each county in the region, and develop an integrated plan to be used in the event of a disaster. The coordination of the project between the participants allow for the advancement of a comprehensive plan to be developed. Planned exercises and disaster drills are completed to test, educate, and prepare the

region for potential disaster responses.

Tasks/Methodology

The administration of the Regional Disaster Medical Health Coordinator project was coordinated and supervised by Fresno/Kings/Madera EMS staff. The tasks in this project involved the identification of the personnel and resources throughout the region in order to organize a pre-planned process for the response in the event of a large disaster. The assigned staff adhered to the program objectives which were included in the Regional Disaster Medical Health Coordinator project proposal submitted to the California Emergency Medical Services Authority.

The project set an objective to provide for the coordination of disaster resources throughout OES Region V. Several meetings were required to obtain an open communication amongst the counties and also to provide information on the goals and objectives of the project.

Outcomes

RDMHC project staff attended meetings at the State EMS Authority to begin the development of a boiler plate RDMHC plan to be used by each of the regions for the organized development and structuring of an RDMHC plan.

This plan would be used by each of the regions to standardize the plan level throughout the state. In addition, cooperative agreements and mutual aid was also discussed.

CSTI and other disaster training continues for RDMHC staff. In addition, SEMS has been fully implemented throughout the entire region. This training will be continuous.

A RDMHC Region V resource manual has been completed and distributed to the state and region. This resource manual identifies the responsible staff from each county to serve as a resource in the event of a disaster.

Conclusion

The RDMHC Project has given the RDMHC project staff and OADMHCs the opportunity to organize the response of a large scale disaster and ensure that there is effective and efficient utilization of resources. The project will continue to improve the preparation and response to potential disasters through the open communications and relationships developed with neighboring counties and staff.

Safety Awareness/Injury Prevention

Grantee:

Imperial County EMS Agency

Project Number: EMS-8031

Project Period: 07/01/98-03/31/00

Project Amount: \$15,000.00

EMS Administrator

John Pritting

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(760) 339-4468

Introduction

Traffic accidents are among the leading causes of death and injury among children under 16 years of age. Education and training are keys to preventing these needless tragedies. Reports indicate that traffic-related injuries and deaths have increased in Imperial County in recent years. The Imperial County Health Department plays an active role in injury prevention and this project is one of several dedicated to saving lives through education.

Project Description

The program will involve conducting workshops, bicycle/pedestrian rodeos, and a media campaign designed to educate children and parents on pedestrian and bicycle safety. The major objectives included hiring a project coordinator, organizing a task force, training the coordinator and task force to conduct the bicycle/pedestrian rodeos, and scheduling and conducting the rodeos.

Tasks/Methodology

The tasks involved with completing the objectives included hiring a project coordinator and organizing a project task force. A mock city was purchased from *Safe Moves* to use for the rodeos. An instructor from *Safe Moves* then delivered the newly constructed "Safe Moves

City" and conducted a train-the-trainer session to teach the project coordinator and task force how to conduct the bicycle/pedestrian rodeos. A media campaign was then conducted to educate the public about bicycle/pedestrian safety and the project coordinator scheduled and conducted the rodeos throughout the local elementary schools in the county during the grant period.

Outcomes

Nine bicycle/pedestrian rodeos were conducted at elementary schools throughout the county with over 2,300 children trained in bicycle/pedestrian safety. The media campaign and rodeos were successful in raising the community's awareness concerning the safety of our children, particularly as they travel to and from school. The "Safe Moves City" that was purchased for this project has been donated to the Brawley Police Athletic League who will continue to conduct bicycle/pedestrian rodeos in the county.

Conclusions

This project has demonstrated the need for an ongoing educational campaign aimed at injury prevention. The project's success in raising the community's awareness about traffic-related injury prevention is evidenced by the many schools that have requested to have the

bicycle/pedestrian rodeos conducted at their sites, but were unable to participate in the program during this grant period. Continued funding for the project is essential and will be pursued through other funding sources and injury prevention projects.

EMS System Design Model - Phase I

Grantee:

Kern County EMS Agency

Project Number: EMS-8032

Project Period: 07/01/98-12/31/99

Project Amount: \$45,000.00

EMS Administrator

Fred Drew

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Introduction

The effect of managed care on local EMS systems is a well known fact throughout the nation. In the near future, within Kern County, other counties throughout the State of California, and other states within the nation, the concepts of EMS system redesign consistent with the demands of managed care will become a reality.

The decision process in the field, without any doubt, will become much more complex. Compounding this complexity, each local EMS system can be expected to develop unique criteria for protocols with the objective of getting the "Right Patient to the Right Place at the Right Time," and to lessen overall costs in EMS delivery.

Project Description

This project involved development of specialized, criteria-based protocols, policies and procedures, and educational curricula for EMT-I First Responders, EMT-I Transport personnel and Paramedic personnel to assess and determine necessity for continued ambulance response, patient transport, or patient transport to an alternative care destination other than a Hospital Emergency Department.

Tasks/Methodology

The project was implemented under the management of the Kern County EMS Department Senior EMS Coordinator. Department staff conducted a basic analysis of EMS system cost sources and provided a description to the EMS System Design Steering Committee (Steering Committee). It was decided by the Steering Committee that the EMS System Cost Sources description document should be used as a check and balance throughout the project.

The Senior EMS Coordinator and extra-help EMS Coordinator developed project tactics and overall strategy in general accordance with the EMS System Design Plan.

Outcomes

Phase One of the project has been completed. Phase Two of the project is nearing completion. Phase Three of the project is under active development.

As part of the Kern County EMS Department - EMS System Design Plan, the EMT-I First Responder, EMT-I Transport Provider and Paramedic Assessment Protocols, Policies & Procedures, and Educational Curriculum, when implemented, will result in "getting the right patient, to the right level of care, the first time".

Preliminary patient care record data research of EMT-I First Responder protocol criteria has indicated a minimum 8% increase in ambulance response cancellations by EMT-I First Responders. This will promote availability of Paramedic Ambulance resources for patients that require Paramedic Ambulance resources, provide some cost savings to Paramedic Ambulance Providers, and provide a more formal process for cancellation of ambulance response by EMT-I First Responders which limits liability.

It is expected EMT-I Transport Provider and Paramedic Assessment Protocols will yield an additional 10% in non-transports and patient referral to a medical advice line resource for continued case management. This will also assist in reducing Hospital Emergency Department patient overload.

At the EMT-I Transport Provider and Paramedic Assessment Protocol levels, protocol criteria for patient transport to an alternative care facility have been developed. Preliminary data research has indicated that a minimum of 18% of the patients currently transported by ambulance to a Hospital Emergency Department would be transported to an alternative care facility (approved urgent care centers, clinics, physician offices that meet authorization criteria).

Specific cost savings resulting from implementation of the project's results are multifaceted and quite difficult to quantify when considering downstream cost savings to managed care providers, government funded payers and insurance providers. It is expected that reimbursement would be stabilized for EMS system providers with some cost savings in promoting more efficient EMS resource utilization. The future cost savings to managed care providers, government funded payers and insurance providers could be extensive.

Conclusion

The most difficult aspect of the project was facilitation of the multi-disciplinary EMS System Design Working Group and maintaining a "comfort level" with a project of this complexity.

Another factor which affected the project schedule were changes in members of the EMS System Design Working Group. With each change, the new member had to be provided a thorough briefing in history, rationale and project objectives. In many cases, the group had to conduct repeated discussion on topics that had previously been resolved. Although group membership changes are to be expected, it is recommended to avoid similar problems that group membership consistency is a significant concern to avoid delays.

EMS System Design - Phase II

Grantee:

Kern County EMS Agency

Project Number: EMS-8066

Project Period: 06/30/99-06/30/00

Project Amount: \$30,000.00

EMS Administrator:

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**Final Report and Abstract Report due
August 31, 2000.**

Cont. Ed. Modules for Basic & Advanced Prehospital Providers

Grantee:

Los Angeles County EMS Agency

Project Number: EMS-8033

Project Period: 07/01/98-06/30/00

Project Amount: \$77,110.00

EMS Administrator:

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**Final Report and Abstract Report due
August 31, 2000.**

Regional Disaster Medical Health Coordinator (RDMHC)

Grantee:

Los Angeles County EMS Agency

Project Number: EMS-8034

Project Period: 07/01/98-06/30/99

Project Amount: \$80,000.00

EMS Administrator:

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Introduction

Region I includes the counties of Los Angeles, Orange, Ventura, San Luis Obispo and Santa Barbara. Los Angeles County is the Seat for the Region I, RDMHC Grant. While Region I comprises only 8 percent of the California land area (12,738 sq. miles) it hosts 42 percent of the state population (13,239,400: 1990 U.S. Census). In addition, since January 1992, California has suffered from 16 federal Major Disaster and Emergency Declarations. Many of these occurred within Region I.

Providing a systematic coordinated medical response including pre-established medical cooperative assistance agreements and maintained communication systems would reduce response time and ensure effective resource distribution. This would subsequently reduce the economic and casualty costs associated with large disasters.

Project Description

The purpose of the 1998-1999 Regional Disaster Medical Health Coordinator Grant #8034 was to maintain and build on the Regional Disaster Medical and Health Specialist (RDMHS) staff position for OES Region I. Responsibilities of this position included but were not limited to the following: maintain and train Operational Area Disaster Medical Health

Coordinators, develop and maintain disaster resource registries, modify the Regional Disaster Plan, identify and implement training schemes, review and enhance the Regional communication system, conduct routine exercises, coordinate Medical and Health Cooperative Assistance Agreements, direct quarterly meetings, prepare quarterly reports, serve as liaison with public and private disaster response agencies, assist in developing the first statewide disaster exercise, provide support to the Northern and Southern California Disaster Conferences and serve as an Agent of the State EMS Authority for all disaster correspondence, preparation, response and recovery.

Tasks/Methodology

The position of RDMHS Staff has been maintained as part of the Los Angeles County, Department of Health Services EMS Agency. Operational Area representatives are maintained by individual county Health Officers. The Region I Resource Guide was updated through Operational Area surveys and information collected from the Emergency Medical Services Authority and the Governor's Office of Emergency Services. Resource listings for the Regional Disaster Medical and Health Plan were collected from the State of California, Department of Health Services Licensing Division. This joint plan includes information for all Operational Areas within Region I and

Region VI. The intent of a collaborative effort was to provide a broader, more systematic response approach. This decision was based on the high frequency of disaster related events within these two Regions and the Southern Region Cooperative Assistance Agreement. The Regional Response Plan is maintained under the auspices of the Standardized Emergency Management System and through the ongoing recommendations from Regions I and VI.

The Southern Region Cooperative Assistance Agreement was completed to provide a standard agreement for the request, mobilization and application of medical and health assistance. It was written through the combined efforts of all Southern Region Operational Areas.

Training schemes for SEMS, HEICS and WMD were provided through local EMS agencies, the Governor's Office of Emergency Services (via CSTI), and area hospitals.

Regional disaster communication was maintained primarily through telephone and fax services. The OASIS satellite telephone provides contact among all regional and state EMS Agencies. Other regional communication instruments include the local HEAR radio system and the transportable satellite telephone system. In addition, the RDMHS and all Region I OADMHC's have received copies of the Regional Information Management System (RIMS) and have been trained to use the new, web-based RIMS maintained by the State OES.

Quarterly meetings, routine exercises, regional reports and appropriate correspondence were maintained through ongoing dialogue between Region I Operational Areas and the RDMHS.

The Geographic Information System

continues to assist the region with mapping capability of medical facilities and emergency response agencies. This has proven helpful during exercises and for various planning issues. Further training and experience are required to provide the region with greater depth of service for analytical and statistical analysis for regional facilities.

Outcomes

Utilizing a permanent RDMHS staff person and subsequent Operational Area Disaster Coordinator has been beneficial in accomplishing grant objectives. All of the regional managerial disaster personnel have been trained in either the SEMS and/or the HEICS systems. OADMHC's have received additional training at the California State Training Institute (CSTI) in courses for disaster managers. The Satellite communications and RIMS terminal have been used in tracking regional resources during exercises and actual disaster events. The completed Unified Southern Region RDMHS Disaster Response Plan and the Southern Region Cooperative Assistance Agreement continue to strengthen the Southern Regions ability to respond effectively and efficiently to emergencies and disasters.

Region I routinely participates in multiple local, regional, state and federal disaster exercises. These events provide ongoing training for regional disaster response activation. September 16 marked the first statewide disaster exercise that included participation of approximately 90% of all medical facilities within California. This and other exercises have improved the systematic disaster response among all Regions and Operational Areas and ensured a communication link in the event of wide-area telephone and/or power outages.

The RDMHS role has provided greater opportunity for disaster related outreach and for developing policy related issues. The RDMHS actively presents regional topics at public and private conferences and assists in collecting and interpreting data for emergency response, hospital bed availability and influenza study committees. In addition, the RDMHS serves on both state and local emergency related committees such as the ENLA VOAD, HEICS Advisory Committee and the EMSA Legislative Committee.

Conclusion

The overall implementation of the RDMHS Project has provided a unique opportunity to improve local and regional disaster preparation and response through active communication among all agencies, disaster training seminars and exercises, cooperative assistance agreements and standardized protocols. Region I played a key role in developing and administering evaluation instruments measuring outcomes of the September 16, State-wide Medical and Health Disaster Exercise. In addition, Region I provided support in coordinating both Northern and Southern California Disaster Conferences.

Rapid Treatment of Acute Stroke

Grantee:

Los Angeles County EMS Agency

Project Number: EMS-8035

Project Period: 07/01/98-01/31/00

Project Amount: \$80,000.00

EMS Administrator:

Virginia Hastings

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Introduction

The Los Angeles County EMS Agency collaborated with physician specialist in the areas of Emergency Medicine and Neurology to implement a project with the ultimate goal of decreasing death and disability from stroke in Los Angeles and possibly statewide.

Project Description

The overall design of the study consists of several phases. It will include acute stroke patients transported to Los Angeles area hospitals by Los Angeles City Fire Department paramedics. Some of the phases are retrospective, others involve paramedic education and training, and others are prospective.

Tasks/Methodology

The project consisted of four major phases. 1) Planning/Retrospective Phase, 2) Paramedic Training Phase, 3) Inpatient/Outcome Data Phase, and 4) Data Analysis/Reporting Phase.

Outcome/Conclusion

Training in the use of the Los Angeles Prehospital Stroke Screen (LAPSS) was achieved with a short LAPSS-based training session during which paramedics demonstrated

improved general stroke care knowledge. In a prospective, in-the-field trial, trained prehospital personnel were able to identify acute stroke patients with a high degree of accuracy using the LAPSS. Use of the LAPSS has the potential to lead to earlier stroke treatment and better patient outcome.

Additionally, the LAPSS was put into place in the field and is used to identify patients with possible stroke. Data collection on outcomes of these patients has begun and continues into the second year of the project.

EMS Plan

Grantee:

Merced County EMS Agency

Project Number: EMS-8036

Project Period: 07/01/98-06/30/99

Project Amount: \$20,000.00

EMS Administrator:

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Introduction

EMS Plans are important documents which should define a work plan for the EMS agency. By establishing specific goals and setting priorities for their implementation, the EMS agency can ensure that the development of enhancement of specific system components proceeds in a logical, prioritized fashion. With the numerous issues and system participants pressing EMS agencies for attention, and the conflicting agendas that each may bring to the table, an EMS plan should represent a consensus document developed in a forum where such issues can be evaluated for their relative value and prioritized based on the perceived needs of the system at large.

To that end, the State of California Emergency Medical Services Authority approved the grant application of Merced County for the development of a new five (5) year EMS Plan for this system.

Project Description

This project was for the development of a new five (5) year EMS Plan for Merced County. The county's original five year plan was developed in 1993, when the county withdrew from the Alpine, Mother Lode, San Joaquin EMS Agency (now known as the Mountain-Valley EMS Agency). The primary objectives

for this project were:

- To conduct a "visioning" process at an appropriate retreat setting to establish the direction and priorities for this five year plan.
- To ensure a broad-based, inclusive process for said development with input from all stakeholders.
- To establish a consensus regarding the high priority issues and ensure broad-based support for addressing each, as well as securing participation from the stakeholders as we take on the task of addressing the issues.
- To meet the State requirements for submission of a five year plan, and update the system resource information database.
- To ensure that said development is forward-thinking, recognizing the substantial demographic change that the County will undergo over the next 5 - 10 years, with the development of the 10th University of California campus in Merced.

Tasks/Methodology

The agency hired the Abaris Group to assist in the plan development, and hired Ms. Diane Akers to professionally facilitate the “Visioning” process. From the meeting, a list of prioritized objectives were established, and that list was sent out to the stakeholders for review and comment. Following input, a draft of the plan, minus the tables, was prepared and sent out for comment. Revisions were made based on the input from the stakeholders.

A data collection instrument was developed and distributed to the system participants to allow us to update the resource database and complete the required tables for the plan. Once the plan was completed (including tables and addendums), the entire plan was sent out to all stakeholders for review and comment, and a public review was conducted at the September, 1999 EMCC meeting.

Outcomes

A resource database and data collection instrument were produced as a result of this project. This database will allow us to keep an updated listing of all system resources available for immediate query as the need arises.

More importantly, this process allowed us to open a dialogue with the stakeholders regarding the future of EMS in this system, in a non-threatening, facilitated setting. This has improved on the collaboration between agencies and communications in general.

Conclusion

This project has equipped the EMS Agency with an up-to-date, consensus work plan that has broad support and participation, and should serve us well into the next century.

Operational Area Disaster Medical Health Plan

Grantee:

Monterey County EMS Agency

Project Number: EMS-8037

Project Period: 07/01/98-06/30/99

Project Amount: \$45,000.00

EMS Administrator:

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Introduction

Monterey County is at risk from a variety of hazards, both natural and manmade. Although past disaster response has been carried out successfully, the Health Department recognized that a comprehensive medical disaster plan for the Monterey County Operational Area was needed to ensure coordination during a disaster. The State EMSA funded the development of a Health Department Medical Disaster Plan in 1998 which provides an excellent internal document, however, it did not address disaster planning issues and concerns of the medical providers in the County. It was determined that the development of a disaster plan for the area health care providers which would include the four acute hospitals, skilled nursing facilities, clinics, surgery centers, dialysis centers, the American Red Cross, and home health agencies would significantly improve medical care to the residents of Monterey County.

Project Description

The project goal was to develop a coordinated, integrated, and comprehensive medical disaster plan for the Monterey County Operational Area. Procedures are to be used by the Operational Area Disaster Medical Health Coordinator at the Operational Area Emergency Operations Center. The plan describes status reports and resource requests used by area

health care providers during an emergency. The resulting plan addresses: 1) management of the OA EOC Health and Medical Branch, 2) coordination of status reporting from community hospitals and health care providers, 3) coordination of resource requests from community hospitals and health care providers, 4) resource management and tracking, and 5) operational assumptions governing disaster medical operations and public health response. The plan will be integrated into the Health Department's Medical Disaster Plan. The medical annex of the Operational Area's Multi-hazard Plan (Annex D) was revised to reflect the new plan.

Tasks/Methodology

At the start of the project, existing plans were reviewed to determine if checklists or procedures for disaster medical health response had been developed in the past. The EMS Agency convened two planning committees, one made up of representatives from area hospitals and the other made up of non-hospital health care providers. Each committee met three times and reviewed draft procedures, operational assumptions, flow charts, checklists, and instructions.

In addition to the planning committees, the EMS Agency elected to maintain the membership and function of the Project Advisory

Committee first convened in 1997 to oversee development of the Health Department's Medical Disaster Plan. The Project Advisory Group met twice to review the draft and final plans.

The method used to write the plan involved step-by-step development of specific procedures and planning tools for review by the planning committee and the Project Advisory Committee members. The consultant facilitated committee meetings that included discussions of planning issues and identification of solutions that could be developed into procedures and forms. Committee members also suggested additional tools to be included in the plan such as flow charts, algorithms, and checklists.

The consultant incorporated revisions and additions and then presented a final draft, which was reviewed by the EMS Agency staff. The final plan was presented for printing and publication on June 15, 1999.

Outcomes and Conclusion

At the start of the project, the planning committees identified the need to develop a standard procedure for timely reporting from hospitals, clinics, surgery centers, dialysis centers, skilled nursing facilities, and home health care agencies to the Health Department Operations Center. The most significant result of the project is the publication of these standardized procedures, forms, and checklists for reporting status and requesting resources in an emergency.

The project goal to write and distribute an Operational Area Disaster Medical Health plan was met. The result is the first concept of operations for disaster medical/health response that incorporates both hospitals and other community health care providers. This plan represents a significant step to ensuring

coordination between hospitals and health care providers and the Health Department in an emergency.

In addition to publication of the entire Operational Area Disaster Medical Health Plan, separate sets of instructions specific to each facility were printed and distributed. The planning committees suggested that it would be more beneficial to print an individual facility plan to attach to their existing disaster plan than receive a complete copy of the plan. These instructions provide standard formats for reporting status and requesting resources in an emergency and were distributed with a cover letter.

Specific project products include: The Operational Area Disaster Medical Health Plan and four instruction sets for (1) Hospitals, (2) Clinics, Surgery Centers and Dialysis Centers, (3) Skilled Nursing Facilities, and (4) Home Health Care Agencies.

The Operational Area Disaster Medical Health Plan contains the following information:

Chapter 1 -

Purpose and Scope, Supporting Plans, Standardized Emergency Management System (SEMS), Alert and Notification, OADMHC Responsibilities, Operational Assumptions, Delegation of Responsibilities (Authority), and Health Officer Authorities

Chapter 2 -

OADMHC Status Reporting Responsibilities, Hospital Status Reporting Instructions, Clinic Status Reporting Instructions, Skilled Nursing Facility Status Reporting Instructions, Home Health Care Status Reporting Instructions, Status

Information provided by the OADMHC to
Hospitals and Health Care Providers

Chapter 3 -

OADMHC Medical Resource Management
Responsibilities, Resource Requests, Resource
Tracking and Management, California Response
Information Management System (RIMS),
Federal Resources, Resources for Weapons of
Mass Destruction Incidents, OADMHC Local
Resource Guide

Chapter 4 -

Operational Area Emergency Operations Center
(OA EOC) Introduction and SEMS
Organization, OA EOC Health and Medical
Branch Checklists.

EMS Plan

Grantee:

Monterey County EMS Agency

Project Number: EMS-8038

Project Period: 07/01/98-06/30/99

Project Amount: \$20,000.00

EMS Administrator:

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Introduction

Monterey County's initial EMS Plan was duly submitted to the Authority, circa 1984, under the *EMS Systems Standards and Guidelines* then in effect. Our plan was last updated in 1995 in preparation for the implementation of a county-wide ambulance franchise (exclusive operating area) under Health and Safety Code §1797.224.

In June 1993, the Authority promulgated a new set of *EMS Systems Standards and Guidelines*. EMS Agency staff promptly began to revise the local EMS plan accordingly, but progress was delayed by several lawsuits which followed the execution of the county-wide ambulance contract in September 1995.

Project Description

This project accomplished a comprehensive revision of the local EMS plan in accordance with current state *EMS Systems Standards and Guidelines*.

Tasks/Methodology

A first draft of Section 2 (Assessment of System) was prepared by EMS Agency staff. The draft was distributed to the members of the Emergency Medical Care Committee, the four

EMS Regional Councils, and the Medical Advisory Committee for their review and written comments. The draft was distributed in subsections, as follows:

February 1997 - Subsection A (System Organization and Management)

March 1997 - Subsection B (Staffing/Training) and C (Communications)

May 1997 - Subsections D (Response/Transportation) and E (Facilities/Critical Care)

October 1997 - Subsections F (Data Collection/System Evaluation) and G (Public Information and Education)

March 1998 - Subsection H (Disaster Medical Response)

Written comments on the first draft were received until June 1998. During this period, the various EMS providers were surveyed for the information required in Section 4 (Resource Directories), and EMS Agency staff drafted Section 3 (System Resources and Operations) and Section 6 (Annex—Exclusive Operating Areas).

The first draft was then revised to incorporate the written comments received and

reflect system changes since its publication. In October 1998, we distributed Draft #2 (comprising Sections 2, 3, 4, and 6) of the EMS plan to the membership of the committees listed above, and solicited any further written comments. Draft #2 was also submitted to County Counsel for preliminary review.

During November and December 1998, meetings of the four EMS Regional Councils were scheduled to review the draft EMS plan and recommend any necessary changes. Staff then prepared Draft #3 to incorporate the changes recommended by the Regional Councils. At the same time, the first-responder agencies were again surveyed for any updates to Section 4 (Resource Directories). Staff also drafted Section 1 (Summary) and Section 5 (Description of Plan Development Process). The full Draft #3 was distributed to County Counsel and to the members of the Emergency Medical Care Committee for their review.

The EMS plan was placed on the Emergency Medical Care Committee's agenda for its regular meeting in February 1999. At that meeting, the Committee was apprised of County Counsel's suggested changes to the document. The Committee suggested two minor corrections and unanimously recommended that the plan be put into final form for submission to the Board of Supervisors.

Outcome

The revised EMS plan was approved by the Monterey County Board of Supervisors on July 13, 1999. On November 9, 1999, the Board approved two appendices to the EMS plan, as follows: (1) the *EMS Communications System Manual*, and (2) the *Monterey County Operational Area Disaster Medical/Health Plan*. These documents were duly filed with the

Authority.

Conclusion

Monterey County now has a current local EMS plan, developed in concert with system participants. This document should provide the framework for future changes within our local EMS system.

Standards & Guidelines for Statewide EMS System Evaluation

Grantee:

Mountain-Valley EMS Agency

Project Number: EMS-8039

Project Period: 07/01/98-06/30/99

Project Amount: \$120,000.00

EMS Administrator:

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Introduction

The need for an effective evaluation model for EMS systems is documented in the National Highway Traffic Safety Administration (NHTSA) publication, *Emergency Medical Services: Agenda for the Future, 1996*. It states; “Models for determining EMS system effectiveness are lacking. The ability of EMS systems to optimally meet future community and individual patient needs is dependent upon the development of an effective evaluation process that can assess and improve the quality of services provided. This process is essential and should pervade all aspects of every local EMS system”. Unfortunately, no guidelines or standardized models currently exist to systematically evaluate, compare, or test EMS system performance in the state of California. Standards and guidelines should define the minimum benchmark structural, process, and outcome indicators, and their associated data collection points. These definitions and standards must be consistent statewide before any broad-based system analysis can occur.

Project Description

The purpose of this project is to produce an EMS system evaluation model, which establishes minimum standards and guidelines for EMS system evaluation throughout the state of California. This document will define a proposed

organizational structure, quality indicators, and processes of EMS system evaluation at the state and local levels. In addition, the document will describe methods and processes for engaging in EMS system improvement throughout the state of California.

Tasks and Methodology

- Develop Statewide Organizational Structure and Oversight for EMS System Evaluation
- Develop Sample Indicators and Associated Data Collection Points
- Develop Model Operating Procedures
- Develop Recommendations for Implementation of Standards and Guidelines

Outcomes

As a result of the first year’s activities, we have:

- 1) Established an informal consortium of EMS agencies that have actively contributed to the project and developed a proposed statewide organizational structure.
- 2) Surveyed EMS agency administrators, medical directors, and other EMS personnel to identify and prioritize system indicators.

- 3) Mapped out a model for engaging in quality improvement utilizing the Rapid Cycle Improvement (RCI) process.

Conclusion

The first year was successful in modeling the organizational structure and operating procedures. We were successful in forming a working consortium, which was able to collect, analyze and openly share standardized data. We are now prepared to finalize the system indicators, collect baseline data on those indicators and engage in a Rapid Cycle Improvement project. Based on these experiences, year two will culminate informal recommendations for the implementation of standards and guidelines for EMS system evaluation.

Automated Data Collection System

Grantee:

Coastal Valleys EMS Agency

Project Number: EMS-8040

Project Period: 07/01/98-10/31/00

Project Amount: \$89,200.00

EMS Administrator:

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**Final Report and Abstract Report due
December 31, 2000.**

Regional Disaster Medical Health Coordinator (RDMHC)

Grantee:

NorCal EMS Agency
Project Number: EMS-8041
Project Period: 07/01/98-06/30/99
Project Amount: \$40,000.00

EMS Administrator:

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Introduction

Upon assuming RDMHC responsibilities for Mutual Aid Region III, Nor-Cal EMS began the process of familiarization with State – promulgated plan concepts and identification of key system participants throughout the region. Regional coordination for disaster response purposes had, historically, been non-existent and much of the time and effort expended in this project has centered around pulling diverse agencies together to realize a common purpose.

Project Description

The project's goal continues to be the improvement in preparations for disaster response through coordination of resources from the operational areas, through education of regional personnel and by providing a mechanism for coordination of resources between operational areas and the State.

Some of the major objectives of this project, as identified by EMSA, are as follows:

- To facilitate the development of operational area medical/health cooperative agreements throughout the region for the coordination and acquisition of medical and health resources to aid in a disaster response.

- To provide ongoing and maintenance training in SEMS to the following:
 - 1) RDMHC Staff: The RDMHC, upon appointment to the position and commensurate with his/her responsibilities as identified by the RDMHC Response Plan and Standardized Emergency Management System (SEMS) Guidelines, will ensure that SEMS training is provided to all staff required to participate in disaster medical/health response activities.
 - 2) OADMHC Staff: Training should be made available to all staff commensurate with their responsibilities as identified by the Operational Area Disaster Medical/Health Response Plan and SEMS Guidelines.
- To conduct a minimum of two regional exercises per contract year to provide training for operational area participants, establish and refine procedures and promote preparedness.
- To coordinate and facilitate local and regional health care facilities training on Nonstructural Hazard Mitigation and the Hospital Emergency Incident Command

System.

- To establish regular quarterly meetings with Operational Area Disaster Medical/Health Coordinators and any regionally established emergency management counterparts from related disciplines (OES, fire, law enforcement) to discuss, develop and implement the Regional Disaster Medical/Health Response Plan and component elements. These meetings could include regionally organized public and environmental health planners, hospital representatives, the American Red Cross and health care facilities planners.
- To identify regional disaster medical/health communications needs and establish a communications system to manage information and resources requests in the region. This system should include the identification of redundant communications systems such as satellite phones, etc.

The RDMHC will participate as an expert consultant and technical advisor on any EMSA committees, conferences, etc. as necessary for the advancement and/or discussion of disaster medical/health planning issues.

Tasks/Methodology

Much of what has been accomplished has resulted from the regional meetings with health officers, county OES officers, home health, regional OES, EMSA, DHS, RACES, CVMA and others. These meetings have provided an excellent forum for development of a cooperative agreement, SEMS information dissemination and general system identification. Not surprising in a large, rural region, the quarterly meetings have

proven to be the primary vehicle for individuals from diverse disciplines to become familiar with each others' roles and to develop an awareness of the statewide picture of the disaster response system.

Outcomes

Working relationships between counties, the region and the state have grown stronger and, generally, a better understanding of the medical assistance system as applied within SEMS has developed. The cooperative agreement developed for the region, once established as a legitimate working document, will provide a cornerstone for further planning and response.

Conclusion

Most aspects of this project are evolving positively. More operational area elements are participating with regional personnel and have helped to move the region closer toward an organized system. Careful planning and close cooperation between state agencies will be needed to provide reliable guidance to this region and others seeking to develop reliable networks and valid, flexible plans.

Statewide EMS Communications Assessment

Grantee:

NorCal EMS Agency

Project Number: EMS-8042

Project Period: 07/01/98-09/30/99

Project Amount: \$97,642.00

EMS Administrator:

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Introduction

Although they are key to an integrated EMS delivery system, past studies documented that California's EMS communications systems are lacking in a number of ways and in numerous geographic areas. Until the first year of this project had begun, no statewide assessment had been conducted, and no statewide plan existed. The first year project conducted such an assessment and provided a starting point for development of a plan.

Project Description

The purpose of this project was to consolidate and incorporate year one recommendations into a comprehensive statewide EMS communications plan. This study identified the current status of EMS communications in the state and determined areas of need. With this knowledge, a plan was developed. With the completion of the research and development phases of the Statewide EMS Communications Assessment during year one, attention was then focused during year two of this project on writing an EMS communications plan for California.

Areas studied as a result of this project included public access, dispatch, interagency coordination, disaster response, hospital communications, training, funding and other areas of interest. Findings from the surveys, on-site

visits and focus group interviews were considerable and established a substantial need for a Statewide EMS Communications Plan. There was also considerable support for the State EMS Authority to take on a substantial leadership role on this topic.

Tasks/Methodology

- Prepare an initial draft Statewide EMS Communications Plan.
- Conduct meetings of the EMS Communications Steering Group in order to review the plan's appropriateness, review input, expand the Steering Group to be more inclusive, and evaluate and recommend resource, policy and other changes to California guidelines.

The process of plan development included facilitating exploration of potential uses of advancing communication technology, assessing the effectiveness of various personnel and resource attributes for EMS dispatching, and developing cooperative ventures between communications centers and health providers to integrate communications processes and enable rapid patient-related information exchange. The EMS Communications Plan takes into consideration methods to further develop and update existing geographically integrated and functionally based EMS communications

networks.

Outcomes

A comprehensive statewide communication plan was developed to ensure consistency and direction across the state with EMS communications.

Conclusion

This plan provides uniform direction and standards for EMS communications with consideration for the varying needs of the diverse regions in California. As a result, EMS providers will experience an increase in efficiency and effectiveness in rendering emergency medical services as well as a decrease in cost. The Statewide EMS Communications Plan ensures that current EMS communications needs are met and serves to guide the state toward the future.

Grief Support Training

Grantee:

Riverside County EMS Agency

Project Number: EMS-8043

Project Period: 07/01/98-12/31/99

Project Amount: \$45,000.00

EMS Administrator:

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Introduction

In 1995, the Riverside County EMS Agency surveyed its 9-1-1 personnel regarding their ability to provide bereavement support in the pre-hospital setting. This survey revealed that the majority of personnel not only felt inadequate in their ability to provide grief support, but also perceived this task as a source of extreme stress on the job. Eighty-seven (87) percent of the respondents stated they would attend a training program in grief support if it were offered.

In 1996, the EMS Agency instituted new protocols redefining death in the prehospital setting. These new protocols broadened the circumstances in which paramedics and EMTs made death determinations. This resulted in less transports of "non-viable" patients to local hospitals, and a greater frequency of 9-1-1 personnel needing to communicate the news of a loved ones death to family members.

Project Description

In July 1997, the Riverside County EMS Agency received funding to develop and implement a grief support program. The goals and grant activities took an unpredictable change in focus from the original objectives during the course of implementing this program. These changes resulted in a well-received and successful first phase in Riverside County EMS

Agency's implementation of *Grief Support for the 9-1-1 Professional*.

The curriculum was continually reviewed throughout the program implementation, evaluations were reviewed after each presentation, and appropriate changes were made throughout the grant process to ensure that the program was meeting the needs of the participants. The program was well received by pre-hospital personnel, evaluated highly, and noted by many participants to be a program that was long overdue and much needed in the pre-hospital setting.

The goals for the final year of the grant project were to develop an evaluation tool to be completed by all those attending the program, ensuring that the material met the needs of the participants. The curriculum was to be modified, when necessary, based on the evaluation forms collected at the completion of each training session. Additional basic grief support training classes were to be presented in both Eastern and Western Riverside County to pre-hospital and hospital personnel. The final goal was to have a two (2) day train-the-trainer workshop in Riverside County to allow for greater implementation of the program.

Tasks/Methodology

The goals were accomplished through

several methods. Several evaluation forms were developed and included in the training packet for the basic grief support program. The forms included the following: Pre-Training Survey, Post-Training Survey, Course/Instructor Survey, CEU Post Test for EMT-I/ EMT-Ps, and a Standardized POST evaluation form was obtained to be administered to law enforcement personnel for POST credit.

Participants were asked to complete a post-training survey as well as a course/instructor survey. Each survey was reviewed by both the instructor and the Project Coordinator for necessary changes in either the curriculum or the presentation manner. Review of the forms indicated that the curriculum was meeting the needs of the participants, and it was decided that the material should remain the same for future classes with continued review of evaluations after each class.

The Project Coordinator contacted local fire departments, police departments, hospitals, and private ambulance providers to determine interest and schedule availability for hosting basic grief support classes. It was determined that three (3) additional grief classes would be completed by June 1999.

The original intent of the final objective was to draw from the pool of previously trained personnel and present a train-the-trainer program to those people that were interested in becoming trainers and a resource for their departments. After polling the participants of the basic training, it was determined that there was not enough interest in a train-the-trainer program to hold the class. Participants felt that while the training was valuable, they did not think that two days of training would give them enough confidence to present the basic program to their respective department or agency.

Outcomes

The completion of this grant project resulted in the training of several Riverside County Fire Departments as well as other health care providers in a well received *Grief Support Training for the 9-1-1 Professional* program. Time was spent educating providers about the program, developing interest in the program and establishing the need for this type of training in different parts of Riverside County.

The Riverside County EMS Agency was able to train several entire Fire Departments in Riverside County, as well as a mixture of other pre-hospital care providers. The Fire Departments that participated in the training have made a commitment to their personnel to continue to provide the appropriate grief support material that was introduced during the training sessions. The implementation of this program and the grief support material that is now available in Riverside County will make the very difficult and stressful task of death notification a little easier for all those involved.

Conclusion

Death and bereavement support in the pre-hospital setting is a very difficult and uncomfortable subject to discuss. The Riverside County EMS Agency has successfully trained over two hundred twenty-five (225) EMS personnel during the two years of this grant. Future goals are to develop specific bereavement training components which address children and cultural diversity.

EMS Plan

Grantee:

San Benito County EMS Agency

Project Number: EMS-8044

Project Period: 07/01/98-06/30/99

Project Amount: \$20,000.00

EMS Administrator:

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Introduction

One of the primary tasks of local emergency medical services (EMS) agencies in California is the development of an EMS system plan. Section 1797.254 of the Health and Safety Code calls for each Local Emergency Medical Services Agency to submit a five-year EMS plan, and annual plan updates to the California EMS Authority.

Project Description

This plan identifies overall needs and objectives for the San Benito County EMS system, in accordance with *California's EMS System Standards and Guidelines*.

Tasks/Methodology

The San Benito County EMS Agency developed the EMS plan in concert with the County's Emergency Medical Care Commission (EMCC). The EMCC, a commission appointed by the San Benito County Board of Supervisors, provides advice to the EMS Agency regarding the development of plans, policies, and procedures for the EMS system. Its membership includes representatives from law enforcement, fire protection, air and ground ambulance, and public health agencies as well as a representative from the County Board of Supervisors, the hospital district, the local chapter of the American

National Red Cross, and a consumer representative.

From September 1998 to June 1999, monthly plan development meetings were held between the EMS Agency and the EMCC. Draft sections of the report were provided to Commissioners prior to each meeting. In addition, the drafts were provided to the Clerk of the Board of Supervisors where they were available to the general public. The Commissioners provided oral and written comments to the plan during and between EMCC meetings. A final draft of the plan was approved by the EMCC in June 1999 and was forwarded to the County Board of Supervisors with a recommendation for the Board to approve the plan. The Board of Supervisors approved the plan at their August 10, 1999 meeting.

Outcomes

The San Benito EMS Plan addresses each of the components required by the California EMS Authority. The plan both assesses the EMS systems current capabilities and identifies areas requiring further development and improvement. The assessment of the EMS system was quite rigorous; in all, over 120 standards and guidelines were addressed in the plan. Implementation of the objectives identified in the EMS plan will proceed according to the two broad time-lines identified in the plan; either

a short-term (one-year or less) or long-term (one to five years).

Conclusion

The overall goal of the plan is to develop and improve the necessary components of the EMS system identified in the plan so as to ensure that San Benito County residents and visitors receive the best EMS care the system can offer. Implementation of the objectives identified in the EMS plan will proceed according to the two broad time-lines identified in the plan; either a short-term (one-year or less) or long-term (one to five years).

Regional Disaster Medical Health Coordinator (RDMHC)

Grantee:

San Bernardino (Inland) EMS Agency

Project Number: EMS-8045

Project Period: 07/01/98-06/30/99

Project Amount: \$80,000.00

EMS Administrator:

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Introduction

The southeastern portion of California with its six (6) counties rely upon each other in times of need. Organizing mutual aid or cooperative assistance became a priority after the population became more dense and with resulting numerous earthquakes and fires. The six counties of the OES Region VI have about 8 million residents. Mexico borders Region VI along Imperial and San Diego Counties. Arizona and Nevada border Imperial, Riverside, San Bernardino, Inyo and Mono Counties.

This planning project is part of a series designed to minimize the effects of natural and manmade disasters upon the populace. The Regional Disaster Medical and Health Coordinator (RDMHC) project has progressed beyond the formative stages. It affords itself a place in the post disaster organization and relationships as well established and maintained. The elected Health Officer, or RDMHC, works on behalf of the Region VI Operational Area Disaster Medical and Health Coordinators.

Project Description

In the Fiscal year 1998-1999 this project set out to build on the basic eleven county Health Officer Cooperative

Assistance Agreement by developing some disaster activation plans, procedures, and communication methods. A Plans and Procedures draft was reviewed by the California EMS Authority, Department of Health Services and the Governor's Office of Emergency Services. Several Counties are updating their disaster plans or writing new ones which reflect modern philosophies about preparation to minimize the disaster effects.

Staff continue to address communications needs where large distances separate population centers in a vast landscape. Changes or improvements in communications technology and costs are expanding the kind and number of tools available to the disaster planner. Inventories such as Satellite-cell phones, trained amateur radio operators and other agencies who are willing to allow emergency traffic require constant exercising and upkeep.

Tasks/Methodology

This project's goals are based upon reasonable achievement potential by the voluntary actions of its member counties. Their staff participate in planning processes designed to assure that resource use after a disaster is maximized. They have complied with requests for assistance based upon an

understanding of the medical and health community's post-disaster needs. Additionally, space, supplies and staff were available for the RDMHC to provide these organizational services through EMSA hosted funding sources.

Outcomes

Accomplishments include the following:

- An eleven (11) county disaster plans and procedures was developed.
- The state's insect and rodent vector control agencies have taken the southern California mutual aid draft agreement and expanded it to their member agencies.
- The hazardous materials disaster response policy and plan were updated for the Region VI Local Environmental Planning Committee.
- The region's hospitals are standardizing their needs and supply ordering mechanisms.
- The Region Transportation Coordinator continues to be a viable link toward organizing ambulance and prehospital provider response.

Conclusion

Generally, projects such as this, when they are coordinated over a large area, the State of California, are the essential means of mitigating the extreme swings of nature. Preplanning is a tool which can expand the efficient delivery and use of

necessary medical and health supplies. Region VI along with California's Regions I - V are afforded the opportunity to have locally designated disaster planners due to the combined efforts of DHS, EMS Authority, and Federal personnel.

Disaster Medical Assistance Team (DMAT)

Grantee:

San Diego County EMS Agency
Project Number: EMS-8046
Project Period: 07/01/98-06/30/99
Project Amount: \$60,000.00

EMS Administrator:

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Introduction

At the request of the California Emergency Medical Services Authority, the Health and Human Services agency applied for and was awarded a grant to coordinate California's statewide disaster medical response simulation exercise, to be held in April, 1999. "Operation Rough and Ready '99" was funded by EMSA with monies from the Prevention 2000 federal block grant, and administered by San Diego Emergency Medical Services Agency.

Locally organized, voluntary Disaster Medical Assistance Teams (DMATs) are the State's first line of field medical response following a major disaster. Their mission is to rapidly deploy a medical team to travel to a disaster-affected location and deliver medical care in a field setting. When activated by federal declaration, DMAT members act, and are paid as, federal employees.

Project Description

The proposed project will fund and organize a Statewide disaster medical response exercise for all Disaster Medical Assistance Teams based in California, integrating operations with the military resources of the California National Guard and Air National Guard. The California National Guard, due to budgetary constraints were unable to participate in this

year's exercise.

This year's exercise, scheduled for April 23, 24, and 25, 1999, will be held in Southern California, at the El Toro Marine Air Base, in Orange County. This exercise will allow DMAT's to train to be able to provide medical care to victims of a disaster, or to persons who may be in need of health care from a system damaged beyond its ability to meet the basic and emergency health care needs of a stricken area. Funds from the grant will be used to pay, via County service contract, for costs associated with the exercise, including transportation, equipment rentals, supplies, printing costs, and also estimated staff time and travel to be used for mandated planning meetings and reports.

The ability of the California Emergency Medical Services Authority to respond to official requests for medical assistance is based on the availability of the DMATs. Under state activation, DMATs may be asked to respond to disaster-affected sites anywhere in the state, therefore, the availability of these teams potentially benefits every community in California. In addition, in large scale disaster, communities in California can benefit by federal activation of DMATs from other states.

This year's overall goal was to maintain readiness of the active DMATs in the State of California, and to foster the relationship between

them.

In the months (four) prior to the exercise, the planning committee decided on six courses that would cover the training needs of all team members. They were:

- Preparation For Deployment
- Patient Preparation and Aeromedical Operations
- Patient Paper Trail
- Radio Communications
- Special Clinical Considerations
- Update on Hazardous Materials and Weapons of Mass Destruction

The following were some of the exercise objectives for Operation Rough and Ready '99:

- Field triage and treatment of casualties.
- Integration of DMAT operations with National Medical Response Teams.
- Set up of field decontamination units and HAZMAT awareness.
- Provide basic field training needs of DMAT members.
- Provide training in the processing standards of NDMS field paperwork.
- Packaging patients for ground and aeromedical evacuation.
- Aircraft safety.
- Mental health issues for responders and victims.
- Learn disaster organizational structure, SEMS and ICS.
- Develop and test radio equipment, and standardized operations procedures.

Tasks/Methodology

Planning for this year's civilian Rough and Ready was initiated in December, 1998, adopting the steering committee approach, with each team

assigned one or more task/responsibilities within the exercise components that are listed below. A total of six meetings were held on a monthly basis, with two held in March, to plan for Rough and Ready '99.

This year's planning component of the exercise was quite possibly the most successful because of the teamwork and cooperation of all DMAT commanders and committee members involved. Each component of the exercise (exercise evaluation, public relations, care and safety, planning, course development and evaluation, moulage operations, transport and communications, procurement and administrative services, and facilities and ancillary support) required some level of planning and development to support the success of the exercise.

A variety of training courses were presented throughout the three days of the exercise, with emphasis in the areas of utilization of team equipment, medical supplies, triage techniques, communications, logistics, transportation, Field Incident Command System and SEMS, HAZMAT awareness and operations, environmental considerations, field living skills, and other areas that may comprise a field disaster medical response.

Outcomes

As evident from the post-exercise evaluation forms and the actual exercise itself, coordination and integration of team responses is an area in which California is a leader among states and must continue to maintain disaster preparedness of these teams.

Due to the withdrawal of the California National Guard, exercise planning time was reduced from twelve months to four. This required modification or exclusion of some of the

training objectives.

The following courses were developed and provided by experienced DMAT personnel:

- Preparation for Deployment (.5 hours)
- Patient Preparation and Aeromedical Operations (1.0 hours)
- Patient Paper Trail (.5 hours)
- Radio Communications (1.0 hours)
- Special Clinical Considerations (.75)
- Update on Hazardous Materials and Weapons of Mass Destruction (4.0)
- Mental Health Issues in a Disaster (1.0 hours)

Due to time constraints, not all courses could be scheduled, so DMAT commanders were directed to provide orientation on basic living skills, Incident Command System, Simple Triage and Rapid Treatment (START), and litter-bearer training, as necessary to their members.

It was also noted that due to the short time frame of the exercise, only one day for setup of tents, one day for training, and one day for actual exercise, that roles of the DMAT participants needed to be made more clear. It was thought that the development of a duty statement or checklist could help in the briefing and/or orientation of the participants prior to or during the first hours of the exercise. With this document, some time could be set aside after the Safety & Security tent was established to review the checklist and provide staff with the opportunity to ask questions.

Conclusion

This year's Rough and Ready '99 field training and exercise was held in Southern California, over three days, allowing for adequate time for members to arrive, set-up camp, receive training, and participate in a full field exercise

involving live, moulaged patients. It is neither realistic or practical to expect volunteer, working professionals to be able to take additional time above and beyond the 3 to 4 day weekend needed to do this type of exercise.

It is also recommended, since the exercise is open to all recognized California-based DMAT's, that future Rough and Ready exercises should be held in the Central/Southern region of the State. All but one team, CA-6, reside in the southern region, hence, this would save on transportation fees and lower the amount of money needed to meet the objectives of future grants.

The method of planning the exercise, the steering committee approach, insured that every aspect of the exercise components were covered in the short amount of time given for planning.

EMS Plan

Grantee:

San Francisco County EMS Agency

Project Number: EMS-8047

Project Period: 07/01/98-06/30/99

Project Amount: \$20,000.00

EMS Administrator:

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Introduction

Local EMS Agencies (LEMSAs) are required to submit Emergency Medical Services (EMS) Plans to the California EMS Authority every five years. The EMS plan is intended to be both a workplan as well as a long-range plan for LEMSAs. In 1996-97, the San Francisco EMS Section undertook a comprehensive community planning process to create the vision and strategic plan for our local EMS system with the ultimate goal of meeting our EMS Plan submission requirement. The result of that local planning process was a document entitled, "*Optimizing the San Francisco EMS System*". Our EMS Plan was based on the findings, recommendations and current progress in implementing those recommendations from that document.

Project Description

The San Francisco EMS Section proposed to complete the planning process and the written EMS Plan for submission to the California EMS Authority. A grant-funded dedicated health planner reviewed the findings and recommendations from our 1996-97 community planning process for EMS and compared them to the requirements of the EMS plan. This individual worked under the direction of the EMS Administrator, in consultation with our Medical Director, to identify planning gaps and develop recommendations for fulfilling these

needs. The health planner initiated internal and external procedures and processes when appropriate to complete the plan. At various points in the review process, we initiated the local approval process that included public input, review and approval by the Director of Health and the Health Commission.

Tasks/Methodology

A health planner was hired under the grant to lead an internal assessment within the EMS Section to determine our compliance with the state EMS Plan standards as well as reviewing our progress in implementing the recommendations from our local planning process, "*Optimizing the San Francisco EMS System*." The health planner interpreted and translated our local planning document into the technical document required under the California EMS Authority planning guidelines. The health planner identified planning gaps not addressed in the "*Optimizing the San Francisco EMS System*" and made recommendations for fulfilling these needs. The planner also recommended and implemented additional planning processes to complete needed sections of the plan. EMS Section staff input and public input were incorporated into the plan. The health planner created and submitted to the California EMS Authority the final draft of the San Francisco EMS Plan.

Outcomes

The San Francisco EMS System met most of the standards set forth in the EMS Authority's EMS systems guidelines. Where these standards were not being met, 11 objectives were developed to address those issues. Additional 109 objectives in areas related to other standards were also identified. Supplemental to this planning document, the EMS Section also references the Optimizing San Francisco's EMS System Report 1996, prepares an annual progress report regarding these recommendations and develops an annual section work plan. Each of these documents has a slightly different focus. The EMS Plan synchronized these planning efforts.

Regional Disaster Medical Health Coordinator (RDMHC)

Grantee:

San Joaquin County EMS Agency

Project Number: EMS-8048

Project Period: 07/01/987-06/30/99

Project Amount: \$40,000.00

EMS Administrator:

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Introduction

Nine years ago, San Joaquin County, along with the other ten counties in Region IV, chose to improve its multi-casualty (MCI) response system. There were situations in the Region requiring mutual aid response, and several incidents occurring on border areas of the Region which highlighted the differences in MCI response by the prehospital personnel. Terminology, operational plans for response, and on-scene triage systems differed. These differences caused delays in care and disputes on scene regarding management and destination of the patients. It became clear that our responses would be enhanced if we would standardize our way of handling MCIs, disasters and medical mutual aid requests. The State funded this project for three years, before converting the Region's efforts to a maintenance medical/health mutual aid grant. Region IV counties found that we could extend the approach used for MCIs into a regional approach for medical/health mutual aid. The same structure with some enhancements has worked to respond to medical/health mutual aid requests.

Project Description

The basic goal of the project has been to standardize the MCI and the medical/health mutual aid response for the counties in Region

IV. The grant has been a great success. The necessary political support for change within the Region was, and still is, strong. The project was able to bring together EMS, OES, Fire and Law agencies within the Region and with the other Regional staff (e.g. fire/law). A MCI Plan was adopted, standardized training/curriculum were developed for all prehospital and hospital components, and key personnel/positions (e.g. OADMHCs, RDMHCs, Disaster Control Facilities) are designated. A MCI Plan that is approved by all counties is in place. For the past four years the State has funded a maintenance grant, which allows the Region IV counties to continue their coordination, update the MCI Plan, and continue training and testing of the response system.

Tasks/Methodology

The Core grant staff positions (Project Director and Project Manager) occupy permanent positions in the EMS and OES agencies in San Joaquin County. Contract personnel were appointed to coordinate/manage the pre-hospital and hospital plans components. The same core staff has been used for the past nine years. In addition, the first years of the grant were spent in identifying the need to standardize within the Region. The support was done through workshops held throughout the Region. From this an Administrative Committee was appointed, with representatives from each

county. The Administrative Committee and the project staff directed the activities of the project. Training needs, political strategies for implementation and project tasks were identified and issues were sorted out at this level. A lot of time was spent at the “grassroots” level to generate support and commitment to this project.

Outcomes

After nine years of work, Region IV has an adopted MCI Plan, which also addresses medical/health mutual aid requests. A standardized curriculum is in place for prehospital and hospital training on the procedures. Instructors have been trained throughout the Region. All plans are consistent with SEMS. OADMHCs and an RDMHC have been designated in each county with alternates. Annual administrative meetings are held to update plans and identify needs. Several table top and mock drills are completed each year. The Regional Plan has been tested several times by actual disasters (floods of 1997, Oakland fires, etc.) and has provided information to keep our Plan and operations alive.

Conclusion

Region IV counties have greatly improved their ability to respond to MCIs and medical/health mutual aid requests. The success of the project is directly tied to “grassroots” support, which came about because of the recognition of the benefits of standardization. Medical/Health management for disasters is difficult at best to do—and most do not agree on how it is best done. We found that the system of building a common base of support, developing a plan, testing it, and revising it annually works. It is an approach that we feel should be used elsewhere in California.

Statewide EMT Registry

Grantee:

San Joaquin County EMS Agency

Project Number: EMS-8049

Project Period: 07/01/98-12/31/99

Project Amount: \$91,004.00

EMS Administrator:

Darrell J. Cramphorn

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Introduction

The EMS Authority, the EMS Administrators Association of California, the Emergency Medical Directors Association of California and numerous local EMS agencies have expressed a need for a Statewide Registry of EMT-I and EMT-II certification data in order to increase their ability to perform background checks on applicants for certification and re-certification, conducting investigations, performing quality improvement follow-up and other LEMSAs responsibilities and services.

In a letter dated October 10, 1996, the EMS Authority solicited proposals from LEMSAs for creating a Statewide EMT-I and EMT-II Registry. In response, a project was awarded in FY 97/98 to develop a Statewide registry for EMT-I and EMT-II personnel. As planned the development and implementation of the Registry would be conducted over two years. The first year of this endeavor saw the creation of the software for managing all of the local EMS agency issued certifications of prehospital personnel throughout California; a one time collection of EMT-I and EMT-II certification data from LEMSAs; the development of a plan for the on-going collection of EMT personnel data from LEMSAs; and, the development of a plan describing the process needed to allow LEMSAs to access the State EMT-I and EMT-II Registry on-line.

In order to complete the work of establishing a Statewide Registry of EMT-I and EMT-II personnel, it was necessary to implement the plans developed in the first year regarding the on-going collection of EMT personnel data from LEMSAs and the process needed to allow LEMSAs to access the State EMT-I and EMT-II Registry on-line.

Project Description

This project created a way for LEMSAs to view and update records in the Statewide EMT Registry on-line. It also provided the EMS Authority the ability to produce various reports based on the data in the Registry. A feature was also created that allows LEMSAs using *EMS Data Pro*TM to automatically submit data to the Registry from their local database.

Tasks/Methodology

The following tasks were accomplished during the project:

- Development of the *EMT Registry* as a secured World Wide Web Application, with multiple levels of access, that allows users to look up and edit data pertaining to California EMT, their certifications and their educational requirements.
- Development of the *EMT Registry*

Report Generator application for the EMS Authority to allow personnel at the Authority to selectively query on and report *EMT Registry* data.

- Development of a new version of *EMS Data Pro* that includes Scantron test processing capability and the ability to exchange data with the *EMT Registry*.
- Development of certification card printing capability for *EMS Data Pro* for the Sierra-Sacramento Valley EMS Agency and for the California State Fire Marshal's Office.
- Implementation of *EMS Data Pro* at the Sierra-Sacramento Valley EMS Agency and at the Sacramento State Fire Marshal's Office.

Outcomes

This project resulted in the successful development of a Web-based *EMT Registry* for California. The application is highly configurable and may come to serve as a registry for additional types of personnel in the future.

This project also resulted in the successful implementation of *EMS Data Pro* at the Sierra-Sacramento Valley EMS Agency and at the California State Fire Marshal's Office. These agencies, as well as all of the other Local EMS Agencies using *EMS Data Pro* in California will be able to automatically exchange data with the *EMT Registry* once it is deployed.

Conclusion

Through this project the EMS Authority has been able to provide a means for Local EMS

Agency and other EMT certifying agencies in California to share information about EMTs and their certifications and training.

The project also brought improvements to *EMS Data Pro*, which is a software package used for management of EMS technician data and patient care data, used by more California LEMSAs than any other system of its kind.

These two applications, the *EMT Registry* and *EMS Data Pro* now provide a state-of-the-art methodology for EMT certifying agencies to exchange data at a statewide level.

ED Outcome Data Implementation

Grantee:

Santa Barbara County EMS Agency

Project Number: EMS-8050

Project Period: 07/01/98-10/31/00

Project Amount: \$76,750.00

EMS Administrator:

Nancy Lapolla

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Santa Barbara, CA 93110

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**Final Report and Abstract Report due
December 31, 2000.**

Emergency Medical Services for Children (EMSC)

Grantee:

Santa Barbara County EMS Agency

Project Number: EMS-8051

Project Period: 07/01/98-02/28/00

Project Amount: \$80,000.00

EMS Administrator:

Nancy Lapolla

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Introduction

Children differ from adults both physically and emotionally, and the treatment of critically ill or injured children must meet their unique needs. An illness or injury that may not be serious to an adult can have long-term impact on a child's physical and emotional well-being. Emergency Medical Services for Children (EMSC) incorporates prehospital care, hospitalization, rehabilitation, prevention, and community follow-up, and takes into consideration the special needs of the pediatric population.

Much of emergency education and training in the EMS system has focused on the adult patient. In Santa Barbara County, 1990 census data show that **twenty-three percent** of the county total **population is under seventeen**. **Additionally, 10% of the prehospital responses** in our county for 1995 **were for children**. These numbers justify the development of a coordinated and well integrated approach to pediatric emergency care. Santa Barbara County's *Injury Data Surveillance Pilot Project (E-code Project)* found that **36% of patients treated for injuries in ED's as outpatients were under seventeen years of age**. The lack of coordination of EMSC efforts creates an imbalance in the level of services available to pediatric patients throughout the county.

Project Description

The overall goal of this project was to plan, develop, implement and evaluate a comprehensive EMSC system for Santa Barbara County. This EMSC system plan addressed all components of an EMSC system based on the guidelines developed by the California EMS Authority. Under the direction of Santa Barbara County EMS Agency, and with guidance from the EMSC Advisory Committee and its subcommittees, the agency will maintain its emphasis on pediatric prehospital, emergency department, critical care, trauma services, data collection, and EMSC program evaluation. Integration of the current program and coordination of injury and illness prevention programs will remain essential. Santa Barbara County EMS Agency will continue its support for the EMSC system after completion of the project.

Tasks/Methodology

The specific objectives are:

- To establish, with the EMS Agency, an organizational and administrative structure for the planning, development, and implementation of a comprehensive EMSC system.
- To establish an EMSC Advisory

Committee.

- To develop an EMSC system plan.
- To develop and implement appropriate prehospital services for children.
- To develop and implement appropriate administration, personnel, equipment and supplies, and policy standards/guidelines for the care of pediatric patients in the Emergency Department.
- To ensure appropriate interfacility pediatric consultation and transfer agreements, and transport services between local hospitals and tertiary care centers.
- To review, and if necessary develop Standards for Pediatric Critical Care Centers for Santa Barbara County by June 30, 1998.
- To develop recommendations for EMSC injury and illness prevention programs and the integration of existing prevention programs with the EMSC system.
- To develop recommendations for hospital and prehospital information management in an EMSC system and data collection for evaluation of the EMSC system.
- To investigate the adequacy of pediatric rehabilitation services for Santa Barbara County and develop recommendations for the integration of these services into the EMSC system.

Outcomes

Local agencies and individuals were brought into the project and formed into a task force. This task force was divided into three subcommittees/teams, each have their own team objectives to meet. The three teams are: Prevention Team, Prehospital Team and the Hospital Team.

The Prevention Team was successful in identifying and prioritizing the areas where we wish to focus our attention.

One area in which we have been very successful, is in expanding the bicycle helmet safety program. The program remains important because the estimated cost of bicycle-related injuries and deaths, for all ages, totals eight billion dollars annually. Enforcing bicycle safety, especially for young children developing safety habits, significantly reduces the high cost of injury related accidents. As a result of the efforts of the Prevention Team, we experienced growth in community participation in the bike helmet program. The EMS Agency collaborated with Santa Barbara Regional Health Authority, seven local hospital emergency departments, and one fire station in New Cuyama to distribute bike helmets. The Santa Barbara Regional Health Authority provided graphic artists to develop camera ready brochures on bike safety.

The Prevention Team developed a North County Prevention Committee during the second year to provide adequate access to those unable to travel to south county for meetings.

The Prevention Team identified a lack of resources for distribution of low cost car seats and education on proper use of car seats. This resulted in requesting and receiving a grant from the Office of Traffic Safety for a Child Passenger Safety Project which will meet the identified needs.

The Prehospital Team has been successful in implementing appropriate prehospital services for children.

The team has developed a pediatric equipment list for the prehospital setting which meets the recommended state guidelines. All

vehicles were inspected and met the guidelines with the exception of pediatric immobilization devices which were purchased and implemented during the second year of the project.

Pediatric Airway Management “Train-the-Trainer” course was conducted with all BLS providers.

Prehospital Team members developed and distributed a new educational curriculum on Shaken Baby /SIDS. This is being taught at Base Hospital meetings and has been incorporated into our EMT training activities.

Team members developed a “Pediatric Run Survey” to identify additional areas needing improvement. The Santa Maria Fire Department piloted the survey and gathered statistics on pediatric calls for six months.

The Hospital Team has been successful in completing all team objectives.

Guidelines for administration, personnel, equipment, supplies, and policy standards for the care of pediatric patients in the Emergency Department were developed, approved and implemented. The Hospital Team planned and carried out 6 Emergency Department consultation visits for 100% completion.

Interfacility transfer guidelines were developed, approved and distributed.

Pediatric Rehabilitation was discussed with State CCS, Rehabilitation Institute of Santa Barbara, acute and pediatric facility representatives and the Hospital Team. Outcomes were that our community does not have adequate numbers of children needing acute inpatient rehabilitation to justify an Acute Pediatric Inpatient Rehabilitation Unit locally, but these community resources are willing to work

together to establish acute pediatric rehabilitation if there is sufficient local need and resources available.

Pediatric Critical Care Standards were not developed as there are no facilities in the County.

The project coordinator is still in the process of establishing a mechanism to obtain an on-going data collection for prehospital and hospital information management. Through the Emergency Department Data Grant, we will be able to incorporate hospital outcome information and link it to the prehospital data we currently collect.

Conclusion

This project has been very successful. First and foremost, a network of pediatric emergency medical and critical care services providers was established. The State has accepted our Trauma Plan, which incorporates pediatric care. The EMSC Advisory Committee, utilizing the California EMSA model, worked arduously to produce documents detailing several key components of the evolving Santa Barbara EMSC system plan which has been finalized. We will continue to build upon these accomplishments and continue to improve the quality of pediatric care in Santa Barbara County through the EMSC system plan and the existing EMS system. The commitment of the Santa Barbara County EMS Agency to maintain the integrated EMSC program remains strong and is critical to the success of pediatric services for children in Santa Barbara County.

Operational Area Disaster Medical/Health Plan

Grantee:

Santa Clara County EMS Agency

Project Number: EMS-8052

Project Period: 07/01/98-06/30/99

Project Amount: \$45,000.00

EMS Administrator:

Pam West

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San Jose, CA 95128

(408) 885-4250

Introduction

In February 1997, the Santa Clara Emergency Managers Association (SCEMA) presented a final report of the first Disaster Medical Planning Workshop. The report recommended that the County Health Officer initiate the development of an Operational Area Disaster Medical Health Plan.

To initiate planning, the Public Health Department convened a Core Planning Committee made up of representatives of local governments, hospitals, clinics, emergency medical services, fire services, SCEMA, County Communications, the Hospital Council Bay Area Chapter, the Santa Clara County Medical Association, and the Santa Clara County Office of Emergency Services (County OES).

On November 19, 1997, the Core Planning Committee and the Public Health Department convened a second Disaster Medical Planning workshop to obtain input from the hospital and medical community. Workshop participants discussed planning issues related to disaster medical response, hospital status reporting, and public health response. The workshop resulted in the Operational Area Disaster Medical/Health Plan Outline which was published in April 1998. The outline established a framework for a plan linking the Health

Department Operations Center (DOC) with hospitals and health care providers.

Santa Clara County Public Health Department obtained State Emergency Medical Services Authority (EMSA) funding in October 1998 to develop the Operational Area Disaster Medical/Health Plan. The Core Planning Committee was reconvened to oversee development of the plan.

Project Description

Two project goals were identified:

- Develop an Operational Area Disaster Medical/Health Plan addressing the roles and responsibilities of the Operational Area Disaster Medical Health Coordinator (OADMHC) at the Operational Area Emergency Operations Center (OAEOC).
- Develop a Public Health Department SEMS organization chart and checklist for use in the Department Emergency Operations Center (DEOC).

The resulting plan addresses:

- Management of a OAEOC Health and Medical Branch.
- Coordination of status reporting from community hospitals and health care

providers.

- Coordination of resource requests from community hospitals and health care providers.
- Resource management and tracking.
- Operational assumptions governing disaster medical operations and public health response.

The Operational Area Disaster Medical/ Health Plan is organized as shown below:

Chapter 1- Purpose and Scope, Supporting Plans, Standardized Emergency Management System (SEMS), Alert and Notification, OADMHC Responsibilities, Operational Assumptions, Delegation of Responsibilities (Authority), and Health Officer Authorities.

Chapter 2- OADMHC Status Reporting Responsibilities, Hospital Status Reporting Instructions, Clinic Status Reporting Instructions, Skilled Nursing Facility Status Reporting Instructions, Home Health Care Status Reporting Instructions, Status Information Provided by the OADMHC to Hospitals and Health Care Providers.

Chapter 3- OADMHC Medical Resource Management Responsibilities, Resource Requests, Resource Tracking and Management, California Response Information Management System (RIMS), Federal Resources, Resources for Weapons of Mass Destruction Incidents, OADMHC Local Resource Guide.

Chapter 4- Operational Area Emergency Operations Center (OAEOC) Introduction and SEMS Organization, OAEOC Health and Medical Branch Checklists.

Chapter 5- Public Health Department Emergency Operations Center (DEOC) SEMS

Organization and Checklists.

Tasks/Methodology

This section describes the methodology applied to accomplish each of the project objectives. The methodology is described by the specific objectives outlined in the project contract, however, it is important to note that the actual plan writing process was adapted to meet requirements of hospital and health care providers and the approach of the Project Consultant.

Existing plans were reviewed to determine if checklists or procedures for disaster medical health response had been developed in the past. The County OES Operational Area Emergency Operations Plan was reviewed. This plan describes the organization and function of the Health and Medical Branch at the Operational Area Emergency Operations Center (OAEOC). Checklists developed by County OES are referenced in the Operational Area Disaster Medical/Health Plan.

Santa Clara County was aware that the Project Consultant was also writing a disaster medical/health plan for Monterey County. Project participants in Monterey and Santa Clara agreed that it would be beneficial to transfer and adapt procedures, checklists, and other planning tools for use in both county plans as long as the specific planning needs for each were addressed. This concept is congruent with the State Emergency Medical Services Authority (State EMSA) interest in developing a prototype plan that can be adapted for use in multiple counties.

The Core Planning Committee was reconvened to oversee development of the Operational Area Disaster Medical/Health Plan. This committee met on December 9, 1998, January 12, February 12, and April 6, 1999 to

review the plan and comment on plan content.

The Santa Clara Valley Health and Hospital System (SCVHHS) also convened an internal agency Emergency Planning Committee. This committee met on March 25, 1999 to oversee development of the SCVHHS SEMS organization and checklists for use in the Department Emergency Operations Center (DEOC).

The Santa Clara Valley Health and Hospital System and Public Health Department gratefully acknowledges the expert advice and assistance provided by hospital representatives, health care providers, and local and State emergency management professionals who gave their time to participate on these committees. Participants are listed in Section H - Project Personnel.

The method used to write the plan involved step-by-step development of specific procedures and planning tools for review by the Core Planning Committee. The consultant facilitated committee meetings that included discussion of planning issues and identification of solutions that could be developed into procedures and forms. Committee members also suggested additional planning tools, such as, flow charts, algorithms, and checklists.

The consultant incorporated revisions and additions and then presented a final draft, which was reviewed by the SCVHHS and Public Health Department management. The final plan was presented for printing and publication on June 30, 1999.

Outcomes and Conclusion

At the start of the project, the Core Planning Committee identified the need to

develop a standard procedure for timely reporting from hospitals, clinics, surgery centers, dialysis centers, skilled nursing facilities, and home health care agencies to the Health Department Operations Center. The most significant result of the project is the publication of standardized procedures, forms, and checklists for reporting status and requesting resources in an emergency.

The project objective to write and distribute an Operational Area Disaster Medical/Health plan was met. The result is the first concept of operations for disaster medical/health response that incorporates both hospitals and other community health care providers. This plan represents a significant step to ensuring coordination between hospitals and health care providers and the Public Health Department in an emergency.

In addition to the publication of the Operational Area Disaster Medical/Health Plan, this project resulted in the publication and distribution of a unique set of instructions provided to hospitals and health care providers. These instructions provide standard formats for reporting status and requesting resources in an emergency. The instructions sets were distributed with a cover letter from the Health Officer and can be easily incorporated into the hospital, agency, or facility disaster plan.

Specific project products include:

- The Operational Area Disaster Medical/Health Plan
- Four Instruction Sets for (1) Hospitals, (2) Clinics, Surgery Centers and Dialysis Centers, (3) Skilled Nursing Facilities, and (4) Home Health Care Agencies.

The Operational Area Disaster Medical/ Health

Plan contains the following information:

Chapter 1- Purpose and Scope, Supporting Plans, Standardized Emergency Management System (SEMS), Alert and Notification, OADMHC Responsibilities, Operational Assumptions, Delegation of Responsibilities (Authority), and Health Officer Authorities.

Chapter 2- OADMHC Status Reporting Responsibilities, Hospital Status Reporting Instructions, Clinic Status Reporting Instructions, Skilled Nursing Facility Status Reporting Instructions, Home Health Care Status Reporting Instructions, Status Information Provided by the OADMHC to Hospitals and Health Care Providers.

Chapter 3- OADMHC Medical Resource Management Responsibilities, Resource Requests, Resource Tracking and Management, California Response Information Management System (RIMS), Federal Resources, Resources for Weapons of Mass Destruction Incidents, OADMHC Local Resource Guide.

Chapter 4- Operational Area Emergency Operations Center (OAEOC) Introduction and SEMS Organization, OAEOC Health and Medical Branch Checklists.

Chapter 5- Public Health Department Emergency Operations Center (DEOC) SEMS Organization and Checklists.

Each instruction set for hospital and health care providers contains the following information:

- An overview of the concept of operations for status reporting and resource requests.
- Status reporting instructions, status

report forms, and a checklist.

- Resource request instructions and a resource request form.
- A format for obtaining status information from the DOC.
- Operational assumptions used to develop the Disaster Medical Health Plan.

Practical Guide for the Develop. & Implementation of EMSC

Grantee:

Sierra-Sacramento Valley EMS Agency

Project Number: EMS-8053

Project Period: 07/01/98-06/30/99

Project Amount: \$65,000.00

EMS Administrator:

Leonard R. Inch

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Rocklin, CA 95677

(916) 625-1701

Introduction

This project was intended to develop a practical guide that provides strategies, options and resource materials for the development and implementation of an Emergency Medical Services for Children System.

Project Description

This is the first year of a two-year project proposing to develop a guide which will complement the existing State EMSC model by providing strategies and information in a "how to" format for implementation of an EMSC system. The guide will include model policies, protocols, letters and forms presented in chapters for ease of use. A Project Advisory Committee was formed to provide statewide EMSC system expertise. The Committee met to review the draft guide, analyze the materials and submit comments to S-SV.

Objectives

S-SV contracted with Pediatric Intensive Care Network to provide expert advice on EMSC system planning, development and implementation. A multi-disciplinary Project Advisory Committee was formed to advise on the collection of materials, review the materials proposed for the Guide and advise on the format and content of the Guide. EMSC systems were

identified and information and resource materials were collected.

A Project Advisory Committee meeting was held to review the summary and provide advice on the format and content of the Guide. A draft guide was developed and circulated for comments.

Tasks/Methodology

Objectives of the project were accomplished by a cooperative effort between the consultants (PICN), S-SV staff and the Project Advisory Committee. Numerous conference calls and meetings took place with the three consultants and S-SV staff. The Project Advisory Committee meeting was held and comments were received that were incorporated in the Guide.

Outcomes

The conclusion of the first year was to circulate the draft guide. Recommendations for changes were to be incorporated into the guide.

Conclusion

This is the first year of a two-year project.

Statewide EMS Evaluation and Planning

Grantee:

Sierra-Sacramento Valley EMS Agency

Project Number: EMS-8064

Project Period: 06/01/99-09/30/00

Project Amount: \$363,920.00

EMS Administrator:

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**Final Report and Abstract Report due
November 30, 2000.**

Emergency Medical Dispatch (EMD)

Grantee:

Solano County EMS Agency

Project Number: EMS-8054

Project Period: 06/01/98-12/31/99

Project Amount: \$35,000.00

EMS Administrator:

Michael Frenn

1735 Enterprise Dr., Bldg. 3

Fairfield, CA 94533

(707) 421-6685

Introduction

The purpose of this grant project was to modify a Priority Medical Dispatch Program in such a way that it would provide EMS response options more consistent with the health care delivery paradigm of managed care. Managed care, with its inherent emphasis on “managing” how health care resources are utilized, is increasingly rejecting the standard EMS response model: “Heart Attack to Hangnail, send a maximal response”. While late to the EMS game, managed care is quickly realizing that the vast majority of EMS activity is for non-acute, non-emergent conditions that do not necessarily warrant an automatic onslaught of first responders, transport agencies, helicopters and law enforcement.

In order for EMS system design to develop congruency with the managed care philosophy, there must be a mechanism (and willingness) to more effectively allocate resources. The most effective way in the EMS chain of events to effect this allocation is through Priority Medical Dispatch (PMD). By adding a managed care interface package (the Omega® Protocols), an alternative to traditional EMS response outcome (ambulance transport to an emergency department) might be possible.

Description

It was intended in Grant Project EMS-8054 to perform a “paper” validation of the Omega® Protocol system. Two PSAPs were utilized (Solano Sheriff’s Office and AMR-Burlingame) with pass-through technology to tie them together. The SO required that 911 calls would not be transferred, i.e., the SO dispatcher would remain on the line throughout the entire call instead of transferring it to AMR. A call was handled as follows: 911 calls we received by the SO dispatcher who, after determining it to be a medical call, would dispatch fire and ambulance. The dispatcher would then hit an automatic ring-down line to AMR dispatch and would advise the AMR dispatcher of an EMD call. The 911 caller was then patched through to the AMR dispatcher, but the SO dispatcher also remained on the line. Thus the call not transferred or dropped, and the SO dispatcher could “audit” the interrogation by an EMD as well as the delivery of Pre-Arrival Instructions (PAI), if they were needed. Written protocols were developed to deal with specific circumstances.

Outcome/Conclusion

Over the course of the project, the following was accomplished:

- The electronic linkage between the primary PSAP (Solano SO) and the secondary dispatch center (AMR-Burlingame) was established and

functioned well.

- Management of 911 calls by SO and AMR dispatchers, including the provision of PAI.
- The data necessary to validate the appropriateness and acceptability of call prioritization by comparing recommended response to the patients' diagnosis has been collected. While preliminary review suggests a very high correlation, a complete analysis will be submitted under separate cover.

The following was demonstrated by this project:

- The use of technology to allow for reliable pass-through of 911 calls has been well established.
- This project modeled a likely configuration (for Solano to use in the short term) to get PAI to all 911 callers (until a central medical dispatch is constructed).
- It is expected that validation at the local level of the appropriateness of PMD will be established.
- The competency of Medical Priorities® product, and especially their quality improvement components (Aqua®) were established. Medical Priorities® offers impressive products.

EMS Plan

Grantee:

Tuolumne County EMS Agency

Project Number: EMS-8055

Project Period: 07/01/98-06/30/99

Project Amount: \$18,600.00

EMS Administrator:

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(209) 536-0620

Introduction

The Tuolumne County Emergency Medical Services (EMS) Agency was created by the Board of Supervisors as a department within the County's Human Services Agency on July 1, 1997, in order to fulfill the responsibilities of a local EMS agency as contained in Health and Safety Code, Division 2.5 et. seq. By statute, the primary responsibility of the Tuolumne County EMS Agency is to plan, implement and evaluate an emergency medical services system, in accordance with the provisions of Division 2.5 of the Health and Safety Code, consisting of an organized pattern of readiness and response services based on public and private agreements and operational procedures. Section 1797.254 of the Health and Safety Code requires local EMS agencies to annually submit a plan for their EMS area to the State EMS Authority. These plans must be consistent with the EMS System Standards and Guidelines established by the EMS Authority.

Grant funding was obtained from the EMS Authority for fiscal year 1998/1999 to assist the Tuolumne County EMS Agency in preparing its first EMS Plan. Between 1981 (the first year of the EMS Act which created organized EMS systems in the State of California) and 1997, EMS Planning for Tuolumne County was performed by the Alpine, Mother Lode, San Joaquin EMS Agency (JPA),

commonly referred to as the Regional EMS Agency.

Project Description

This project was designed to provide Tuolumne county with its first independent EMS Plan, as defined by H&SC 1797, since Tuolumne County first began organized advanced life support (ALS) service in 1976.

Tasks/Methodology

The following tasks were identified and accomplished during this project:

- Increase hours in the EMS Coordinator Contract and include the responsibility for developing and obtaining EMS Authority approval of an EMS Plan for Tuolumne County.
- Develop an EMS Plan Sub-Committee.
- Develop Draft EMS Plan.
- Adoption of the EMS Plan.
- EMS Authority Approval of EMS Plan.

Outcomes

In September 1998 the County hired a permanent part-time (30+ hours per week) EMS Coordinator with the responsibility for completing the objectives of the grant and developing an EMS Plan for the County. Other objectives

accomplished as part of the grant included:

- Development of an EMS Plan sub-committee comprised of members of the County's Emergency Medical Care Committee to assist the EMS Coordinator in developing the EMS Plan.
- Review of State EMS Authority guidelines and EMS plan requirements.
- Review of other Counties' EMS Plans, including Kern and Stanislaus Counties.
- Analysis of our current system compared to the State's minimum and recommended standards.
- Determination of our optimal system based in regards to the State's minimum and recommended standards.
- Development of a first draft of the EMS plan for review by sub-committee members.
- Survey of the County's EMS resources for developing Tables 2-11.
- Review of the current status of each of the standards and development of goals and objectives.
- Final draft of Plan developed and presented for public comment.
- Review of comments received by EMS Plan sub-committee and modifications to plan.
- Review and approval of EMS plan by the County's EMCC.
- Review and approval of EMS plan by the County Board of Supervisors.
- Submission of EMS Plan to the EMS Authority.

Conclusion

The project's main objective, the development of a Tuolumne County EMS plan, was accomplished. Many areas of the EMS

system requiring improvement and attention, such as emergency medical dispatch, field triage criteria and an expanded scope of practice for paramedics during inter-facility transfers, were highlighted during this process. The development of the EMS plan has already resulted in the establishment of objectives for the EMS agency during the coming fiscal year and has helped develop a consensus among EMS participants on areas of our EMS system which need to be changed, upgraded, improved or modified.

EMS Data Management

Grantee:

Ventura County EMS Agency

Project Number: EMS-8056

Project Period: 07/01/98-06/30/99

Project Amount: \$89,996.00

EMS Administrator:

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2323 Knoll Drive, Suite 100

Ventura, CA 93003

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Introduction

Ventura County EMS seeks to enhance its current documentation and data collection system to allow real time data collection through funding of the Ventura County Comprehensive EMS Data Management Project. Without adequate capabilities to analyze clinical outcomes in a timely manner, VCEMS is limited in its ability to make critical EMS system changes necessary to ensure high quality pre-hospital emergency care. Recent technological advances and new systems standards have made it clear that implementation of an improved data management system is vital to validate system needs and plan for future systems development.

Project Description

The purpose of the first year of this grant is to develop and implement a software application for transport agency field personnel documentation of care provided to ill and injured persons in the pre-hospital setting. An additional purpose is “real time” data collection. The project objectives include development and implementation of an EMS pre-hospital data reporting system for transport agency personnel, an EMS Plan integrating the data system into plan processes and evaluation, data system query and reporting requirements, and CQI processes.

Tasks/Methodology

A consulting firm was engaged to develop the software application. Local, State and Federal documents defining EMS data collection requirements were used as the basis for the application. The application is installed on tablet computers with touch screens and CDPD modems. Data is transmitted from the tablet to the server by frame relay. Testing by field personnel identified “bugs” which were corrected. Suggested improvements were prioritized and some were implemented for the first version. The remaining improvements will be incorporated into subsequent versions.

Outcomes

Products and reports, including but not limited to the following, will be developed: software, database, PCR report, statistical reports on destinations, destination decision, field personnel activity, procedures performed, patient conditions, and mechanisms of injury. The agency also use the data to perform CQI analysis of the system.

Conclusion

Implementation of this portion of the overall project will provide “real time” data entry and documentation with a printed PCR that is available to the hospital, via download, in a timely manner. Information will be available as appropriate for each level of service, e.g., a

paramedic will be able to access the data on calls for which s/he is provided care and documentation, EMS response/transport agencies will be able to access their records, receiving hospitals' records on the patients who came to their hospitals, base hospitals' patients for whom they provided medical control, and the EMS agency will have access to all data. In the future, dispatch agency data will be added, as well as base hospital medical control data and patient outcome data from all hospitals.

An agency embarking on a new documentation and data system should be prepared to have the process take much longer than originally anticipated.

EMS Data Management

Grantee:

Ventura County EMS Agency

Project Number: EMS-8067

Project Period: 06/30/99-09/30/00

Project Amount: \$71,790.00

EMS Administrator:

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**Final Report and Abstract Report due
November 30, 2000.**